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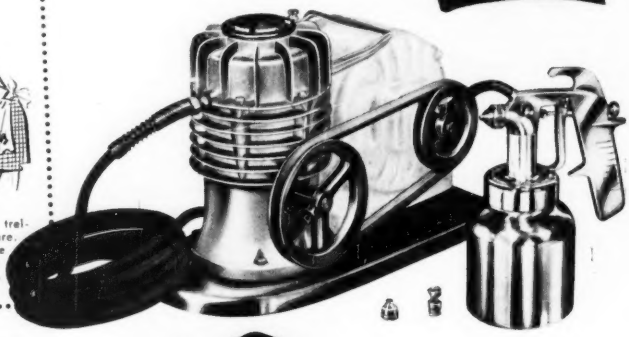

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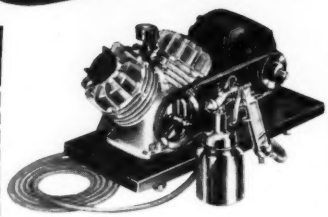

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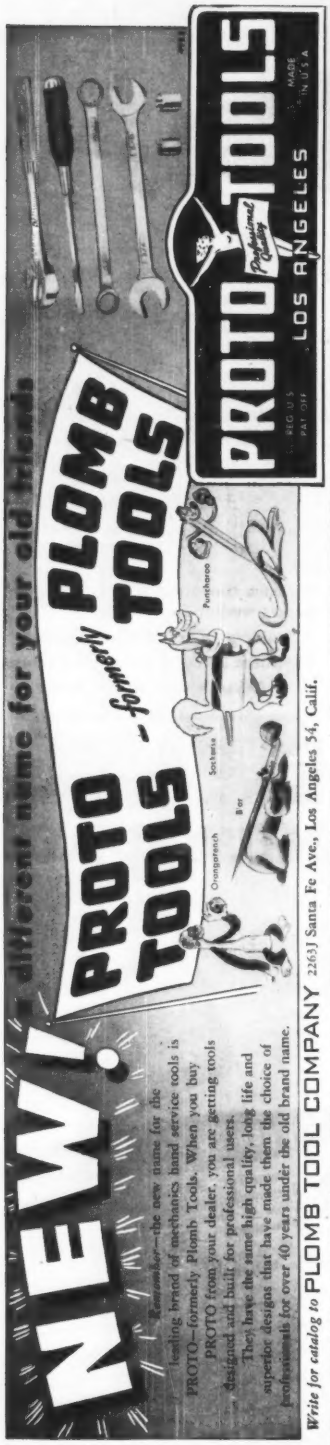

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Popular HOME CRAFT

America's First HOME WORKSHOP MAGAZINE

VOL. 20, NO. 1 — WHOLE NO. 123

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Main Office: 814 No. Michigan Avenue, Chicago 11, Ill.; Phone SU-7-1585

Arthur W. Wilson & Assocs., New York City, 40 E. 50th St., Phone MUryhil 8-0467
C. L. Matthews, Philadelphia, Pa., 340 W. Allens Lane, Phone CH-7-0547
James C. Galloway, Los Angeles, Calif., 816 W. Fifth St., Phone MUtual 8335

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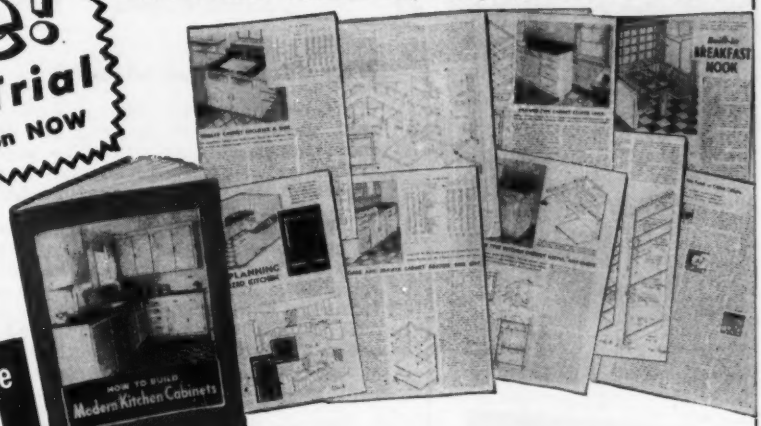

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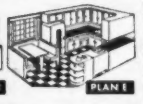

PLAN D has cabinets along one wall and utilizes corner for convenient dinette. PLAN E is laid out on the efficient U principle around three walls. Built-in breakfast nook included.

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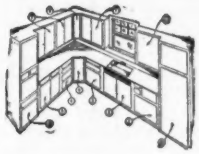

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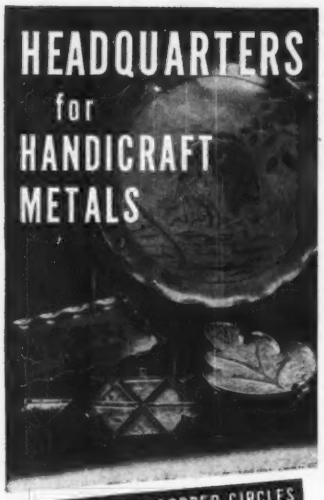

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Observations of the publisher

Why every other month?

I consider some of our most valuable daily mail those "gripe" letters our subscribers send us when they have complaints to register. Every publisher gets them. To me they are among the most important letters we receive. Let me tell you why.

When a man writes a letter and bawls you out, he has something on his chest. He has no secretary to dictate to; mostly he writes it out in longhand. His letter tells you what he really thinks. Whether he is right or wrong, you can depend on it that he is sincere, and you know where you stand. It is mighty seldom we cannot square away a person like that and wind up the best of friends.

An analysis of our complaint mail over a long period reveals that most subscriber-complaints are based on a misunderstanding of our publishing frequency. Many new subscribers assume that we publish every month, whereas POPULAR HOMECRAFT is issued every other month. Those readers figure that on the in-between months we neglected to mail their copies.

Chances are, there are other readers who also wonder about this bi-monthly business, but have not written about it. So that's the reason I am devoting my column this issue to an explanation of POPULAR HOMECRAFT's bi-monthly schedule:

PH was introduced to the workshop hobby in 1930, after much research and analysis. Our study indicated that the average workshop craftsman did not have enough time to get his money's worth out of a project magazine which came to him every month. They, themselves, expressed a preference for the every-other-month arrangement.

After several years of it there was a certain amount of disagreement on that theory and along about 1935 we decided to go monthly. Well, we did. We published POPULAR HOMECRAFT every month for a time.

But only for a short time. It did not take us long to find out our mistake. Talk about being deluged with complaints and criticisms! Then, now, and forevermore—we are convinced that the high majority of workshop craftsmen mean it when they say: "We cannot get thru POPULAR HOMECRAFT in two months, let alone one."

And that is why we issue PH every other month. We will continue to give you as much volume and as much variety as we can—and we'll always give you more project material than you possibly can build in a lifetime.

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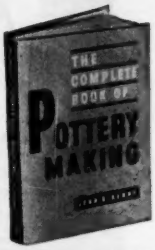

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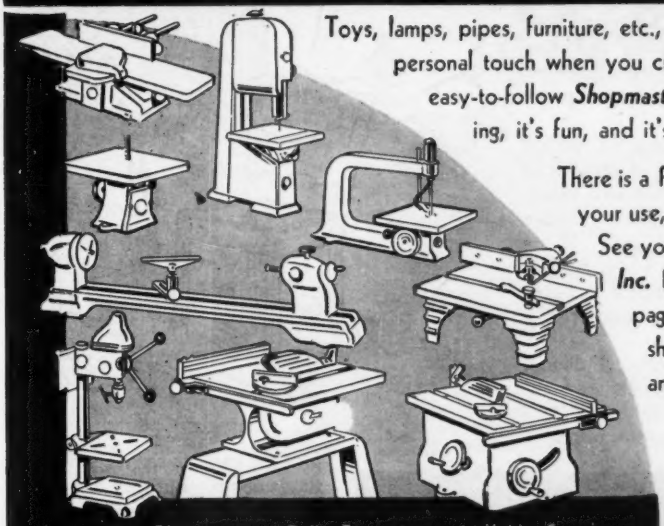

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This certificate entitles you to $2.50 worth of **Shopmaster** Plans with the purchase of any **Shopmaster** Tool. Circle the plan numbers desired. Your **Shopmaster** Dealer or **Shopmaster, Inc.,** will redeem this coupon. One to a customer. Coupon void after Dec. 31, 1949.

Tool Purchased _____ Registration Card No. _____
Dealer _____ Buyer _____
Address _____ Address _____
Signature _____ City and State _____

Redemption made by Dealer _____ Plans to be mailed direct to customer _____

51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76

This coupon is void if prohibited, licensed, or taxed in your state or locality.

TWO FIFTY

Under the Upholstery By Roy O. Eastman

UP IN Maine last summer Mama bought some mid-Victorian chairs. So since about Christmas I have been working weekends and holidays and some evenings taking them down to the wood and refinishing the frames. If I do say it, they're pretty nifty.

The toughest part of the job is taking off the old upholstery. It always is. I know one of my friends and faithful readers will chuckle a fervent amen. He has taken off twenty pounds and has twenty-five to go.

As I ply my tack puller, with which I have become singularly adept in that I haven't nicked a finger through the last two chairs, I find I am uncovering a lot of things besides the frames.

I go about this job almost reverently. I do not hum nor whistle because I am seeing the honest workmanship that was done under the upholstery some seventy-five years ago, and listening to the voices of the men who did it and who long since have laid aside their tools.

No day laborers these, starting and stopping with the toot of a whistle or the clang of a gong. No time clock governed their hours, no labor boss stood over them to check and curb their work.

So they put in more than time—they put a part of themselves into every job they did—*under the upholstery.*

And they drew extra pay too, without any check-off system, pay they could take home to their wives and children, the glowing pride of honest craftsmanship.

They didn't have to drive so many tacks under the gimp so the covers would stay on years longer than was needed. But they did.

They didn't have to tie the springs so well or fasten the webbing so securely as to stand fifty years of sitting without a single sag. But they did.

They didn't have to shape and glue the joints to serve generations then unborn. But they did. And all under the upholstery where nobody could even see it but the workmen themselves—and their God.

Roy Eastman was one of the pioneers in market research—many credit him with being the pioneer market research man. For years he headed the only independent market research organization in the country. He also established the first fully-organized advertising agency research department. (Fuller & Smith, Cleveland, 1919.)

In 1938, as he puts it "more by accident than by design," he began to specialize exclusively in editorial or reader research and built up specialized methods, equipment and personnel for that purpose.

So as I go on with my task I feel the eyes of those old honest workmen still fixed on me with a challenge to match their workmanship with my own. And the frames get a little more sanding and rubbing down than if I hadn't seen what was *under the upholstery.*

I stroke on the final coat of wax, buff it down with an electric buffer and give it a final polish with an electric polisher. The man who made the chair had no such gadgets; he worked by candle light, but with skillful hands and an honest heart.

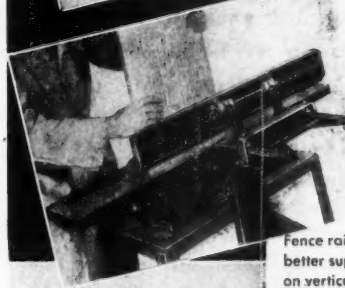
I think I'm through and stand back to admire the job. I feel a reproachful look and hear voices again. I put on another coat of wax.

Guest Editorial

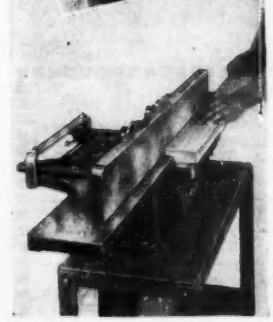
ANNOUNCING THE *NEW Atlas* 6" JOINTER-PLANER

Has big precision ground table for work on long boards

- ★ 42" Precision-Ground Grey-Iron Table
- ★ 32" Two-Way Tilting Fence Rigidly Supported at Two Points Close to Cutter Head
- ★ Removable Cutter Head
- ★ Stationary Rear Table for Greater Accuracy
- ★ Cutter Head Raises or Lowers for Simultaneous Blade-Height Control
- ★ Exclusive Rabbeting Scale
- ★ Sealed for Life Ball Bearings
- ★ Extra Heavy Construction Throughout — Big Capacity



Fence raises for better support on vertical work



The only Jointer-Planer with a scale to set table widths. Saves time — promotes more accurate workmanship

Fine furniture building and true "professional" workmanship on home repairs and remodelling are now practical for any home shop with this big new Atlas 6" jointer-planer.

Running at 4100 RPM its 3 tool steel cutter blades give you velvety-smooth finishes on planing, beveling, tongueing, rabbeting, end-joining, and edging operations. It does in seconds what often takes hours by hand methods! And its big table and big capacity handle long, wide, and heavy boards.

Best of all, the new exclusive features of the Atlas, eliminate time-wasting details formerly necessary with jointer operation. In the Atlas, for the first time, you get *simultaneous blade positioning!* The bearing housing caps are pivoted, and each has a screw-jack mechanism that quickly raises the cutter head so that blades, once properly ground, are *simultaneously aligned* with the tables. The rear bearing cap is easily removable so the entire cutter head can be quickly taken out and the blades resharpened *without disturbing their setting.*

Other exclusive Atlas features are the *"rabbeting width scale,"* and the *vertical fence adjustment* to provide more support for working the ends of long boards, plus many new refinements. But get all the facts. Send a postcard today and completely illustrated literature will be rushed to you at once.

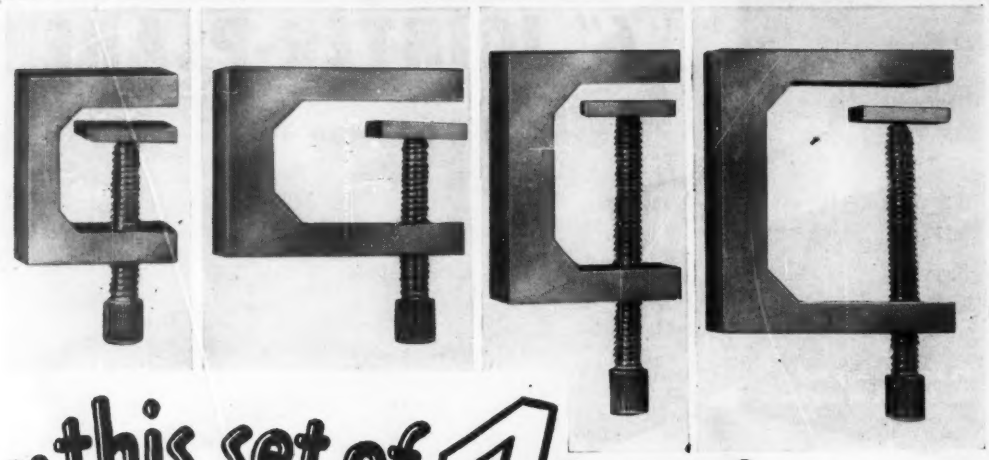
ATLAS PRESS COMPANY

944 N. Pitcher St., Kalamazoo, Mich.

Atlas — Atlas Power King

MATCHED PRECISION TOOLS FOR WOODWORKING AND METALWORKING

OUR GIFT TO YOU



..this set of 4 "C" clamps

—with a two-year subscription to POPULAR HOMECRAFT

If you have been buying POPULAR HOMECRAFT by the single copy (35c), a two-year subscription will save you 70c. That's just like getting two issues free. Or if you have been subscribing a year at a time ($2), the two-year subscription will save you 50c—and that's approximately 15%!

Place your order now. Remember, it can be for a new subscription or a renewal of your present subscription whenever it expires. You gain either way.

Every workshop craftsman needs these "C" clamps

The set of four gives you a good range of useful sizes: 1" wide x 1" deep; 1" wide x 1½" deep; 1½" wide x 1" deep; 1¾" wide x 1½" deep. They're stronger than steel—made by X-Acto of a new light weight, high strength magnesium. Equipped with steel screws and aluminum lock plates. They're real craftsmen's tools; you will find them indispensible in a hundred and one ways once you own a set. Packed as a set in handy box.

POPULAR HOMECRAFT, 814 North Michigan Avenue, Chicago 11, Illinois

I want that swell set of 4 "C" clamps! Here is my $3.50 for a two-year ☐ new (☐ renewal) subscription. (Add 25c a year extra for Canada; 50c a year extra for other foreign.)

NAME _____

CITY & ZONE _____

ADDRESS _____

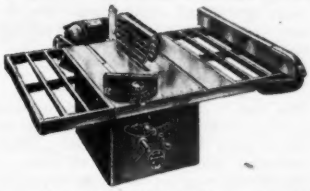
STATE _____ SO/49

It's New on the Market

Additional information concerning any of the following items may be obtained conveniently and without charge by writing to POPULAR HOMECRAFT, 814 N. Michigan Ave., Chicago 11, Ill.—Be sure to include the code number which precedes and identifies the item that interests you.

Ball Bearing Tilt Arbor Saw

(No. 634) Atlas Press Co., Kalamazoo, Michigan announces a new low-priced tilt arbor saw, Power King 3001, $39.50 f.o.b. Kalamazoo, less motor. It's a big-capacity saw, with tilt arbor design. The blade tilts, work stays flat for greater safety and convenience on angle cuts.



Depth of cut is 2¼". Table is 12 x 16" precision-ground grey iron, with 7⅛" working surface ahead of blade. For more table area a low-cost grill extension is available. When added to the right side it is possible to rip to the center of a 24" panel. Two table extensions provide a 16 x 25½" work support.

Crack Filler Seals Itself

(No. 635) Shel-Plas, manufactured by the Benwell Corp., 3010 Book Tower, Detroit 26, Mich., is a self-sealing wall crack filler that allows the user to repair as he paints. No shellac, sealer, or sanding is necessary. Exclusive oil base feature allows it to fill cracks deeper. Dries

harder than plaster and adheres better. Easier to apply than plaster; won't set quickly. Works well under all flat paints and oil flat. Fills the grain of plywood so thoroly that it can be painted without the grain showing. Also may be used in caulking gun to seal doors, windows, etc.

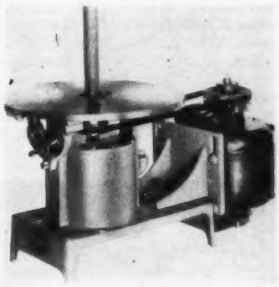
Designs with Liquid Plastic

(No. 636) Flexcraft, is a hobby kit which enables anyone to set up a liquid plastic workshop for making scatter pins, earrings, comb adornments, leaded glass-like jewel box covers, and an unlimited

variety of ornaments of all kinds and colors. It retails at $6.95. The Flexcraft user twists wire into simple forms such as leaves, flower petals, animals, etc., and dips them into the liquid plastic. Distributed by Geo. O. Watson Co., 164 W. Lake St., Chicago 1, Ill.

Oscillating Spindle Sander

(No. 637) A new oscillating spindle sander for hobby workers is being made by the Minneapolis Machine & Tool Co., 1905 Washington Ave. So., Minneapolis 4, Minn. The Lux Junior is made of cast



aluminum, with a two-way tilt table 11" in diameter. The base measures 6" x 12". This machine will sand any length—straight, curved edges, bevels of various degrees, and inside holes from 5/16" in diameter, as well as convex and concave curves to ⅛" radius.

EVERFAST

All Purpose

LIQUID CEMENT

The Best Friend of Every Hobbyist and Homecrafter

EVERFAST sticks—and stays stuck—no matter what your particular hobby or home interest is. Model builders, Shellcrafters, and Handicrafters who have used EVERFAST have found it the ideal bond under all conditions. It is all-purpose—the all-in-one—colorless, waterproof, quick drying and absolutely dependable. Every batch must pass rigid routine laboratory tests—that's why EVERFAST is always uniform in quality, tensile strength, color, and drying time. Try it once—it becomes your "firm and fast friend" for life. Your dealer probably carries it—if not, why not get acquainted by sending 10c to Howe & French, Inc., 100 Broad Street, Boston, Massachusetts.

Build it with
EVERFAST
"It stays put"
Manufactured by
HOWE & FRENCH, Inc.
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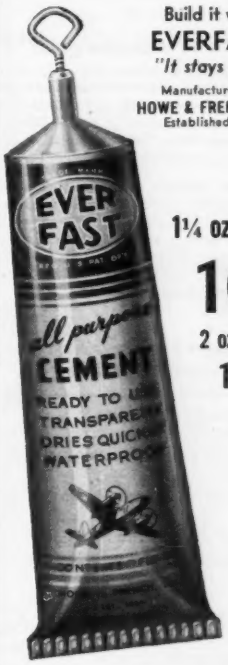

1¼ oz. tube
10c
2 oz. tube
15c

HOWE & FRENCH, Inc.
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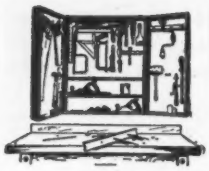
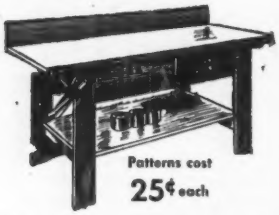




SAVE MONEY—
make it with
EASI-BILD* Full-Size Patterns!

SAVE MORE than ½ store cost—build this 6-foot Workbench and Tool Chest yourself! Easi-Bild Full-Size Patterns require no special tools or skill. Just trace pattern on wood; saw, and assemble with one of the CASCO Glues described below.

*Copr. 1949, Easi-Bild Pattern Co.

How to choose a glue:

For boats, outdoor furniture, sports equipment—joints that must withstand outdoor exposure—*CASCOPHEN* (Resorcin Resin Glue). The first completely durable glue available to homecraftsmen.

For furniture, toys, heavy-duty home repairs—use *CASCAMITE* (Urea Resin Glue) where you want a light-colored or mold-proof glue line. Use *CASCO* (Casein Glue) for loose-fitting joints, general heavy-duty jobs. Both easily mixed in cold water.

SEND COUPON FOR WORKBENCH AND TOOL CHEST PATTERNS TO:

Casco Pattern Dept. PH-99
P. O. Box 215, Pleasantville, N. Y.

Enclosed is $.....for material checked below:

( ) Handy Workbench, Pattern No. 15—25¢

( ) Tool Chest, Pattern No. 71—25¢

( ) 24-page Pattern Book illustrating over 100 pattern projects—20¢

Name_____

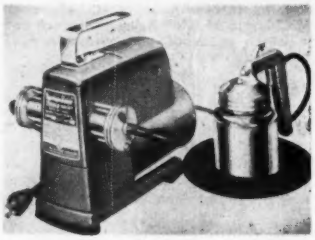
Address_____

City_____Zone_____State_____

THE BORDEN CO. • CHEMICAL DIVISION
Makers of Casco Glues

Portable Spray Unit

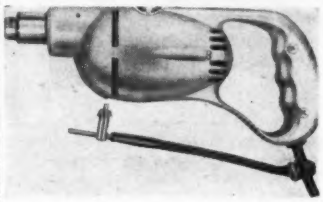
(No. 638) Spraymaster Model SM-25, for home, farm, and shop use is offered by Portable Electric Tools, Inc., 255 W. 79th St., Chicago 20, Ill. It is claimed that there is practically no limit to the variety of spraying that can be done with this unit. Works equally well in spraying



lacquer, enamel, paint, insecticides, and moth-proofing solutions. An optional accessory consisting of hose with tire valve chuck enables the unit to inflate automobile, truck and tractor tires.

General Utility Tools

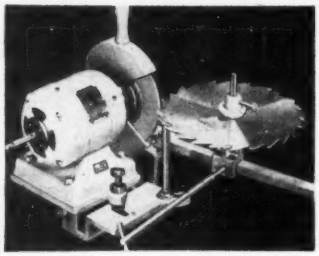
(No. 639) Cummins Portable Tools, 4740 N. Ravenswood Ave., Chicago 40, announces three new ¼" General Utility



Drills. Model 150, with Jacobs 1B geared chuck, $20.95; Model 160, with Jacobs hex-key chuck, $18.95. (Both have Jacobs rubber flex chuck key holder permanently attached to cord); Model 170, with keyless chuck, $17.95.

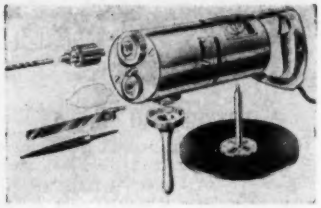
Saw Gummer

(No. 640) This machine, new to the woodworking industry, is offered by Belsaw Machinery Co., 315 Westport Rd., Kansas City 2, Mo. With it precision jointing, gumming, tooth forming and sharpening on both rip and cut-off circular saws are performed at substantial time-saving. Handles all types of circular jaws with ½" to 2" center holes; from 8" to 48" diameters.



Portable Electric Tool

(No. 641) A multi-purpose, portable electric tool especially valuable to maintenance men of all types, carpenters, plumbers, electricians, garages, aircraft factories, etc., is announced by Smilan Tool Co., 2848 W. Pico Blvd., Los Angeles,



Calif. For the first time, a single, portable tool now accomplishes drilling, sawing, filing, sanding, polishing, buffing and other specialized applications. The tool may be used on a wide variety of wood and metal operations.

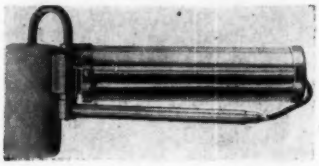
10-in-1 Tool

(No. 642) To speed-up close tolerance reading, checking and setting. Unlike the height gage, this tool has a wide platform mastering from front face of block. A limited base area makes it easy to position on bosses, pads and lugs, and inaccessible places of machined castings. Its vernier readings refer to face of platform with

base of block as zero. This design makes it possible to eliminate many shop made gage blocks designed to specific dimensions. The bar scale is made adjustable to compensate for any wear on base of block. A thumb screw is provided on platform to accommodate an arm for holding a dial indicator. Made by Barr Instrument Co., Inc., 134 225th St., Springfield Gardens 13, N.Y.

Pressurized Paint Roller

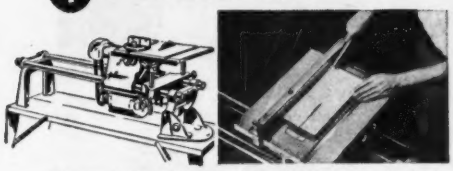
(No. 643) This paint roller is a new painting tool which rolls on paint to flat surfaces faster and smoother than it can be painted with a brush. Designed for home use, the "Flomatic" Roller (Model H-1) eliminates stooping to dip paint, reduces wrist and hand fatigue from pushing and



pulling the paint onto surfaces and saves cleanup time because paint goes on the wall, not on the floor. More than a half pint of paint, held under pressure in the handle, is fed thru the 4" roller into a seamless wool pile cover. Measuring 5½" x 12", the unit sells for $29.75 at paint and hardware dealers. The Rubberset Co., 56 Ferry St., Newark 5, N.J.

5 RUGGED POWER TOOLS IN 1 FOR $169.50

1 8" CIRCULAR SAW

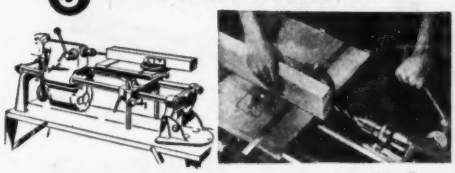


Effective table width up to 56". Maximum depth of cut, 2¼". Machined tilting table, ribbed for extra strength. Precision-tooled rip fence and miter gauge. Unique micro-adjustment permits extremely accurate ripping.

2 12" DISC SANDER

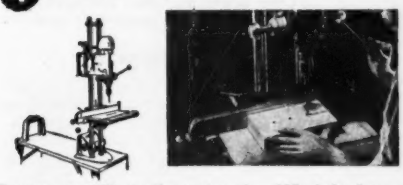
Cast-aluminum disc easy to attach and remove. Extra-large, adjustable table measures 14½" x 17". Miter gauge and rip fence can be used for accurate squaring and jointing. Has features found in no other disc sander.

3 HORIZONTAL DRILL PRESS



Extremely useful operation possible only with SHOPSMITH. Permits large, heavy pieces to be drilled or mortised quickly and accurately. Eliminates need for jigs. Length of work limited only by size of room.

4 VERTICAL DRILL PRESS



SHOPSMITH drills to the center of a 15" circle, has a maximum clearance table to chuck of 27". Jacobs key chuck takes drills from 5/64" to ½" diameter. Rugged, six-spline spindle with 4" feed. Variable speeds from 875 to 3500 rpm.

5 33" WOOD LATHE

With a 15" swing, SHOPSMITH has greater capacity than most other heavy-duty lathes. Distance between centers, 33". Swivel-arm tool rest always slides parallel to ways.

For less than $200—and with eight square feet of floor space—you can have a power shop second to none in capacity, accuracy and flexibility. It's SHOPSMITH—five heavy-duty, extra-feature tools in one unit so beautifully engineered, so ingeniously designed that you can convert from tool to tool *in less than 60 seconds.*

Never before such amazing capacity

Imagine a circular saw that cuts to center of 8-foot plywood panels . . . a lathe that takes work up to 15 inches in diameter . . . a drill press that mortises doors and panels as easily as it drills miniature parts . . . a disc sander that squares, miters and finishes with "try square" accuracy. You get these, and more, with SHOPSMITH.

Outperforms single-purpose tools

Compare SHOPSMITH with any combination of single tools at any price. Compare it for accuracy, capacity, all-round utility. You'll see why the thousands of men who own SHOPSMITH praise it so enthusiastically. On display at any Montgomery Ward store and at leading hardware or department stores. SHOPSMITH, complete with attachments, costs $169.50. With heavy-duty ½-hp. ball-bearing motor, $199.50.

Your complete power workshop in just 18"x60" floor space.
With ½-hp. ball-bearing motor illustrated, $199.50.

SHOP SMITH
REG. TRADE MARK

And that's not all! We've more to tell you, but no more space to tell it here. It's all covered in an attractive, illustrated booklet. Write for your free copy today!

Address: **SHOPSMITH, Dept. 103-R,** *at factory nearest you*
12819 Coit Rd., Cleveland 8, Ohio, OR
417 Montgomery St., San Francisco, Calif.

I'm interested in SHOPSMITH. *Please send me a free copy of the descriptive booklet. And tell me where I can see* SHOPSMITH *demonstrated.*

*Name*_____

*Address*_____

*City*_____ *State*_____

FREE!
NEW EDITION

HOW TO CHOOSE AND USE TOOLS

Every home craftsworker should have a copy of this completely revised edition of the famous Disston Saw, Tool and File Manual—previous editions read by nearly 2,000,000 people. Contains 64 fact-packed pages . . . tells how to use tools, sharpen saws, make wood joints, select the right wood for the job, plus much other valuable information. Written in down to earth language by men who know and use tools. Ask your Hardware Retailer for a FREE copy, or write direct.

DISSTON D-23
HAND SAW

DISSTON

THE SAW MOST CARPENTERS USE

Preferred by home craftsworkers who insist on the best in saws. Perfectly balanced. Comfortable handle. Less tiring to use. Enjoy the Economy of Quality.

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WHEN YOU BUY A DISSTON PRODUCT YOU
BUY DISSTON STEEL SKILL and SERVICE

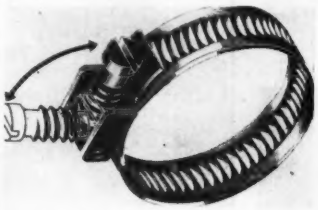
New 6" Sander-Polisher

(No. 644) For sanding, polishing, drilling and other jobs, a new 6" sander-polisher has been announced by the Home Shop Division of Skilsaw, Inc., 5033 Elston Ave., Chicago 30. It is recommended for removing paint and varnish, polishing,

drilling metal and wood, removing rust, sharpening axes and garden tools, rounding and polishing glass edges, buffing, stirring paint, and other purposes. This is the forerunner of an entirely new line of portable power tools to be manufactured by this firm.

"Geared" Hose Clamp

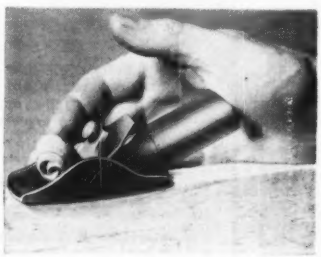
(No. 645) Now in production by the Actus Corp., Mt. Vernon, N.Y., the Eagle hose clamp employs a hinge principle for quick initial engagement and a gear type



screw for fast take-up after the clamp is in place. The clamp may be installed either before or after assembly of the hose connection.

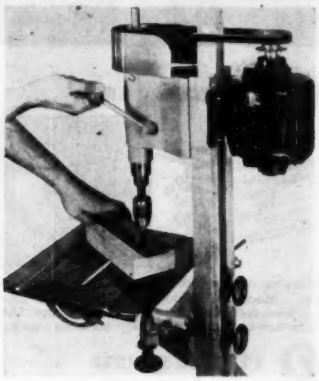
Speed-Grip Pocket Plane

(No. 646) A new pocket-sized plane that is easy to grip has been designed by the Speed Corp., 512 N.E. 73rd Ave., Portland, Ore. Its small size face (3¼" x 1¼") and positive grip make it an easy to use tool for fitting and finishing work. The extension handle gives the user a powerful grip that will provide maximum leverage. The tool steel blade is specially treated and guaranteed to hold its edge. Price is $1.95.



5-in-1 Supershop

(No. 647) Five power tools in one—saw, drill press, lathe, sander, and grinder—is the Supershop combination manufactured



by Power Tools, Inc., Beloit, Wis. Includes an 8" tilting table saw which cuts to a maximum depth of 2½", vertical and horizontal drill press, 30" lathe, disc sander and grinding wheel. All running parts are precision ground. Equipped with lifetime-lubricated ball bearings and precision-bored bearing seats. Price $59.95.

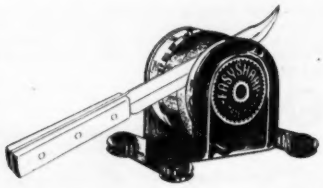
Compass Saw

(No. 648) A new compass saw, the product of Chicago Specialty Mfg. Co., 2954 W. Lawrence, Chicago 25, Ill., ac-

tually revolves thru 360° of an arc. Can be ready to cut by flipping the lever and turning the blade. The blade can be set at any angle for cutting into corners, under pipes, around fixtures, and in almost any inaccessible spot. The dual purpose, interchangeable, tempered steel blades cut wood and metal with ease.

Knife Sharpener

(No. 649) This is primarily a household article rather than a workshop item, but the craftsman will appreciate its tool-like performance. The compact Easy-sharp knife sharpener grinds and hones,



does not burn cutting edge, is easy and safe to use. Has a silicon carbon stone and nickel plated guides, baked enamel finish. Manufactured by Cooke and Co., 179 W. Washington St., Chicago 2, Ill.

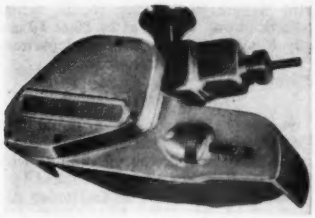
Model Builders' Solder

(No. 650) Proved Products Mfg. Co., San Fernando, Calif., announced its new De Luxe Ribbon Solder. This is a low

melting ribbon of solder 3/8" wide containing flux. In use it is applied where wanted and heated with an ordinary match or a soldering iron. The manufacturers claim for it the maximum of neatness, strength and penetration.

Portable Belt Sander

(No. 651) This belt sanding attachment for any electric drill and flexible shaft, made of machined parts and cast aluminum housing, has phosphor bronze and self-lubricating bronze oilite bearings. Handled like a plane, it will do rough or



light sanding. This is accomplished by interchangeable pressure pads supplied with the sanding kit. Shop Chief Tools are manufactured by the United States Ind., Chicago, $29.95. George Alpert Co., 401 Broadway, New York 13, N.Y., is national sales agent.

Low Cost Welder

(No. 652) An inexpensive, easy-to-operate welding outfit has just been announced by the Four-Way Welder Co., 17 E. 23rd St., Chicago 16, Ill. The manufacturer states that the average man finds

ordinary electric welding easy with this new equipment. By following instructions he can make repairs on bicycles, home appliances, autos, farm implements and general equipment.

The Most Versatile Tool a Man Can Own

DREMEL *Electric* MOTO-TOOL

The "Pocket Size Machine Shop"

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with one emery wheel point
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Moto-Tools, Kits and Accessories should not be confused with "bargain offers." We invite you to compare Dremel Products feature for feature with other similar equipment. If you are not fully convinced ours are far superior in quality, design and performance, we don't want you to buy.

Great for Hobbyists — Speeds Up Repair Jobs — Saves Time and Labor

WIDELY USED IN INDUSTRY

Moto-Tool is a precision-built electric tool, backed by over 13 years of industrial use in such plants as: General Electric ● Ford ● Remington Arms ● Nash-Kelvinator ● Westinghouse ● Douglas Aircraft, etc.

PRE-WAR PRICES STILL PREVAIL

MOTO-TOOL KIT No. 2 with 23 accessories including **high-speed steel cutters** and Model 2 Moto-Tool in natural finish hardwood case... **$23.50**
MOTO-TOOL NO. 2 with one emery wheel point **$16.50**

10 Reasons Why Moto-Tool's a Better Buy!

- Oil-less, sealed bearings
- Patented automatic chuck lock pin
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- Dust filtered air cooling system
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- Exclusive hanger hook
- Sturdy 110-120 Volt AC-DC motor
- Weight only 13 oz.
- Cutters in No. 2 Kit are made of high-speed steel (not common high carbon steel) for longer life, faster cutting.

BIG VALUE!

Moto-Tool Kit No. 1

WITH 34 ACCESSORIES
Only $17.50

Moto-Tool Kit No. 1 contains the lighter Model No. 1 Moto-Tool and 34 practical accessories (steel cutters, grinding wheels, etc.) in an attractive, lacquer-finish wood case. It's the biggest value in the field **$17.50**
MOTO-TOOL NO. 1 with one emery wheel point **$9.85**

PORTABLE DRILL PRESS

Only $9.95

(Less Moto-Tool)

Add all-around versatility to your Moto-Tool with this 12" high drill press. Just the thing for creating costume jewelry, model making, carving, routing, drilling, etc. Utilizes No. 2 Moto-Tool, which can be raised, lowered, or swung in any direction. Weighs 8½ lbs. (Less Moto-Tool) **$9.95**

WHERE TO BUY Buy Moto-Tools from your dealer. If he cannot supply you, send Money Order in full for items desired and we will ship **postpaid.** Or, send only **$2** now and pay postman balance plus postage on delivery. **MONEY-BACK** if not delighted after 5 days' trial. Catalog of Dremel Tools **FREE!**

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☐ Enclosed find $..... (Check or M.O. in full). Ship items checked below at once, postpaid.
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☐ Moto-Tool Kit No. 2—$23.50
☐ Model 2 Moto-Tool—$16.50
☐ Moto-Tool Kit No. 1—$17.50
☐ Model 1 Moto-Tool—$9.85
☐ Catalog of Dremel Tools
☐ Drill Press—$9.95 (Less Moto-Tool)

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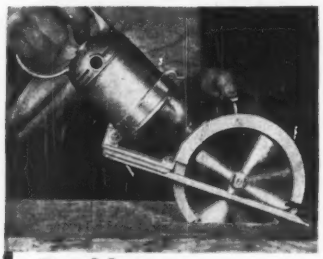


Double use from your drill motor with LITE-SAW

Lite-Saw converts a standard 1/4-in. electric drill into a 6-in. portable saw. Change from drilling to sawing or back in a moment. Rips, cross-cuts, bevels and cuts-out plywood, masonite, plastic and wood up to 2-in. thick. Manually controlled guard for extra safety. Satisfaction guaranteed. Send check or money order to Future Products Co., 3625h North Mississippi, Portland 12, Oregon.

New lower price.

LITE-SAW Complete with 6" Saw $19.95 POSTPAID

ORDER NOW!

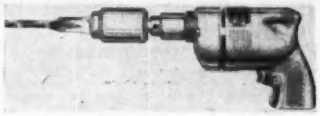
Automatic Template

(No. 653) A new time-and-labor-saving tool for accurate inside measurements between two walls or surfaces is made by the Eliason Tool Co., 2117 E. 56th St., Minneapolis, Minn. Called the Eliason Automatic Template, it was designed

primarily for measurements of stair treads and risers, but can be used also by cabinet makers, linoleum layers and handymen. This automatic template will measure from 32" to 42"; with only a slight turn of the handles it adjusts to accurate length and angle variations.

New Adapter

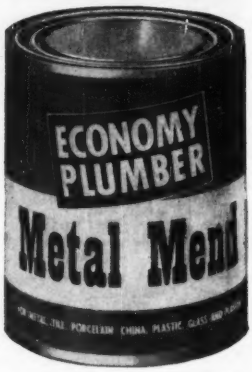
(No. 654) With this adapter you can bring your mortising chisel and electric drill together to form a portable mortising tool. The new adapter, known as the "Bull Mortising Adapter," fits the chuck of any electric drill (or drill press). It



also fits any of the standard mortising chisels available at hardware stores and mill supply houses. Can be attached in your electric drill or drill press in seconds. Available from Bertram Mfg. Co., 3121R Main St., Kansas City, Mo., for $6.95.

Metal Mend

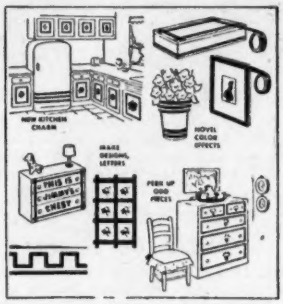
(No. 655) Metal Mend, a versatile adhesive and filler which repairs metal, tile, glass, china, porcelain and plastic has been introduced. It "works like putty—hardens like metal" and is impervious to water, steam, oil and gasoline. Can be



used for indoor or outdoor repairs and installations. Won't shrink or crack after drying and can be sanded smooth and painted. Available in 3 sizes from The Economy Plumber Co., 39 Lispenard St., New York, N.Y.

Decorative Tape

(No. 656) You can give every room colorful borders, designs, striping and trim with this new self-adhesive decorative tape called Dec-O-Tape. A colored enamel tape in handy roll form that's simple to use and fun to apply. You



don't even have to moisten Dec-O-Tape; just apply and smooth it in place with expert hand-striped results. Adjustable, washable, removable and re-usable claims the Meyercord Co., Chicago, Ill., national distributors. Retails at 20, 30 or 50 cents in 3 widths at hardware, department, stationary and variety stores.

New Plastic Finish

(No. 657) Phenoplast, a liquid finish which coats the surface and becomes practically part of the material to which it is applied, has been introduced by L. Sonneborn Sons, Inc., 88 Lexington Ave., New York 11, N.Y. Phenoplast is applied like varnish and renders the object phenoplasted well-nigh damage proof. Used like glue, it becomes "joiner" so that wood or metal so joined will survive wind, weather, temperature changes and almost any amount of wear and tear. Tough, rugged and transparent, Phenoplast gives woods, metals, steel, tile, Masonite and composition materials a surface protection usually associated with a baked-on finish. Price $2.50 per pint, $12.50 per gallon.

Plastic Spray

(No. 658) Sprazit Plastic Spray, manufactured by Plasti-Kote, Inc., 425 Lakeside Ave., N.W., Cleveland, Ohio, is excellent for the home workshop hobbyist as it is easy to apply and quick to dry.

Preserves, protects and waterproofs every type of material against rust and stain with a single treatment. Simple to apply, sets almost instantly, dries hard in less than 10 minutes.

(*Continued on page 61*)

WHAT do you want to make

THE HOME WORKSHOP LIBRARY OFFERS YOU MORE THAN 500 COMPLETE PLANS IN HANDY BOOK FORM

ORDER THIS ONE NOW BEFORE IT SELLS OUT!

CHRISTMAS DECORATIONS—Cards, Gifts, Toys

Edited by Perry S. Graffam. (6" x 9". 96 pages. 50 articles. 350 illustrations. Stiff paper cover.) Christmas is twice as much fun and satisfaction when you put a part of yourself into it. The hobbyist knows that best, because the year 'round joy of making things reaches its highest pitch at Christmas time. This book presents 14 splendid projects on interior and exterior Christmas decorations and illumination; 12 articles on Christmas tree accessories and trimmings. 30 pages are devoted to making Christmas cards alone. A final section includes especially suitable gifts the hobbyist can make; also a well-chosen selection of toys for the wee folk. **$1 postpaid**

LEATHER PROJECTS

Edited by Perry S. Graffam. (6" x 9". 88 pages. Over 30 projects. 400 explanatory illustrations. Stiff paper cover.) Leather is one of the world's oldest crafts. It also is one of today's most popular hobbies—for men and women of all ages. This book presents some of the best projects for leather tooling and chasing developed in recent years. Among the patterns described and illustrated are wallets and billfolds, belts, letter and key cases, purses and handbags, photo and toilet cases, camera and stationery cases, waste basket, book marks and ends, ladies' accessories, chasing dyed leather, pictures in leather. There is an especially fine discourse on tools and how to make them. **$1 postpaid**

DOLL HOUSES & FURNITURE

Edited by Perry S. Graffam. (6" x 9". 80 pages. 40 articles. 200 illustrations. Stiff paper cover.) "Sugar and spice and everything nice—that's what little girls are made of." There's a heap of happiness for some little girl packed between the covers of this how-to-make-it book. For you, too, if you make any of these 40 doll house and furniture items for someone you love to "spoil". These items are the best of 20 years' collection, in the minds of *Popular Homecraft's* editors. The complete instructions are supplemented by more than 200 photos and drawings. **$1 postpaid**

45 TOYS & GAMES (For junior years)

Edited by Perry S. Graffam. (6" x 9". 88 pages. 45 projects. 350 illustrations. Stiff paper cover.) 45 modern toys and games for today's youngsters. Scooters and jeeps, roller coasters and skate sails, spiral railways and model airplanes, sky-rocket guns and indoor tennis tables. These and many more make this the finest collection of fun- and exercise-provoking toys and games for juniors. Its wide variety of large and small projects, the complete step-by-step instructions, and the 350 illustrations, make it an ideal build-it-yourself book for the novice and the skilled craftsman alike. **$1 postpaid**

PROJECTS IN METAL

Edited by Perry S. Graffam. (6" x 9". 96 pages. 44 articles. 300 photos and drawings. Stiff paper cover.) This make-it-yourself book concentrates on forgings and wrought iron, with supplementary sections on projects in copper, tin and brass . . . pewter . . . tables and stands. Also describes gold plating, electro plating and etching, nickel and cobalt plating, metal spinning. Among the 44 articles you will find artistic designs in fireplace sets, chimney and shutter ornaments, lanterns and lamps, iron tables, mail boxes, decorative novelties, and more. **$1 postpaid**

TOYS & GAMES FOR WEE FOLK

Edited by Perry S. Graffam. (6" x 9". 96 pages. 60 toys. 400 illustrations. Stiff paper cover.) When you browse thru this book you'll think you are in the toy section of a department store at Christmas time! Young tots will squeal with delight at the circus animals and wagons, pull-toys, soldiers and castles, jitterbug dancers, puzzles, marble games, blocks—and many more. Make them yourself with hand tools or power tools. Instructions are complete and easy to follow, and the 400 illustrations make them still simpler. **$1 postpaid**

BIRD HOUSES, FEEDERS, BATHS

Edited by Perry S. Graffam. (6" x 9". 64 pages. 28 articles. 200 illustrations. Stiff paper cover.) There is no more popular workshop project than hostels and havens for our feathered friends. Nowhere will you find a more representative and attractive collection than in this book. 28 different designs are described: log cabins; tepees; colonial; African; marine; cafeteria; martin; streamline, etc. They will attract 27 kinds of birds. Can be made from lath, logs, scrap lumber, celluloid, concrete, metal. Illustrated with photographs, working drawings. **$1 postpaid**

METAL NOVELTIES

Edited by Perry S. Graffam. (6" x 9". 88 pages. 37 articles. 200 photos and drawings. Stiff paper cover.) This book is one of two new titles in The Home Workshop Library from which metal workers will derive no end of pleasure and usefulness. *Metal Novelties* is devoted to the smaller projects—hand-wrought novelties in copper, brass, pewter, iron, aluminum, etc., with a separate section on metal lamps. The four basic divisions are: Hand-wrought novelties, lamps, spinning, articles of copper. The projects run the full gamut from desk sets and ash trays, through sconces and candlesticks, to bracelets and plates. Plus many others. **$1 postpaid**

FENCES, GATES, TRELLISES

Edited by Perry S. Graffam. (6" x 9". 96 pages. 57 articles. 350 illustrations. Stiff paper cover.) Make your yard the focal point of interest in your neighborhood. These excellent make-it-yourself projects cover a broad range: arbors and trellises . . . gates and fences . . . garden shelters . . . terraces, pools, rock gardens . . . walks . . . lawn and garden novelties . . . pedestals . . . barbecues . . . greenhouses . . . garden lights. Real photographs supplement the detailed working drawings and show you what to expect. **$1 postpaid**

GARDEN FURNITURE

Edited by Perry S. Graffam. (6" x 9". 96 pages. 60 articles. 400 photos and working drawings. Stiff paper cover.) Shows how to get more fun, more relaxation out of your garden. 60 different make-it-yourself items of outdoor furniture and related projects: A dozen various chairs, tables, benches; chaise lounges; couches; outdoor desk; shelters; flower bowls; wind mill for atop your garage; wheel barrows; fireplaces; swings; outdoor lamps; garden swimming pool; terraces; sun dials; wishing well; hose reel; garden umbrella. Easy-to-follow instructions show you how to make these yourself with customary workshop tools. **$1 postpaid**

HOBBY BOOKS, 814 North Michigan Avenue, Chicago 11, Illinois

Please send me *The Home Workshop Library* books I have checked here, at $1 each.
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☐ Garden Furniture ☐ Gates, Fences, Trellises ☐ Bird Houses, Feeders, Baths
☐ Metal Novelties ☐ Projects in Metal
☐ Christmas Decorations & Cards
☐ Leather Projects ☐ Doll Houses & Furniture ☐ 45 Toys & Games for juniors ☐ Toys & Games for Wee Folk

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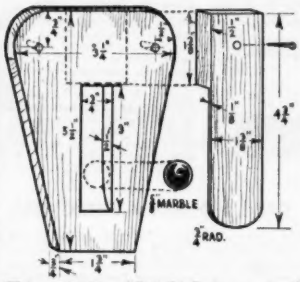
ENJOY MORE · HAVE MORE · SAVE MORE · make it yourself

THIS MONTH'S PRIZE WINNERS

in the Popular Homecraft "Quickie" Project Contest

FIRST PRIZE
$25 U. S. SAVINGS BOND
DR. J. M. McKIM
106½ N. Franklin
Kirkville, Missouri

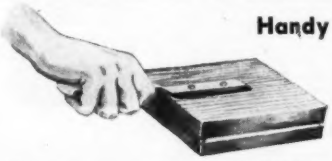
Novel Towel Holder

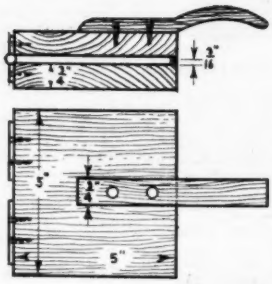


This winning "Quickie" is a novel towel holder that can be made easily in an hour or so. Its design was originated by Dr. McKim. In this case, scrap wood was used. Tools involved were jig saw and hand chisel (for the marble groove). All dimensions are given on the sketch. Sand smooth and finish to suit.

SECOND PRIZE
10-YEAR SUBSCRIPTION TO POPULAR HOMECRAFT
MR. FRED E. REMUS
Route No. 3
Sheboygan, Wisconsin

Handy Hamburger Press

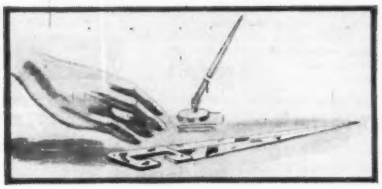


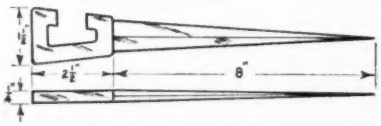


There's a busy spot for this "Quickie" in every kitchen. It's a simple but useful press for making hamburger patties. Two 5" squares of hardwood form the top and bottom. A 5/16" x 5" block is used as spacer on one end. A hinge holds the blocks apart on the other end. A curved handle is screwed to the top. Waxed paper or stainless steel plates will keep the meat from sticking.

THIRD PRIZE
5-YEAR SUBSCRIPTION TO POPULAR HOMECRAFT
MR. CASIMIR RAUBA
4546 S. California Ave.
Chicago 32, Illinois

Plastic Letter Opener





A piece of clear plastic ¼ x 1½ x 10½", a scroll saw or jig saw, and a file are all you need to make this prize-winning "Quickie." Not even much time. The initial which forms the handle can be your own. Sketch your letter opener on paper, transfer to the plastic, cut out on the scroll saw or jig saw, file the edges to a smooth finish, file to a clean taper. That's all there is to it. Color the edges with a plastic dye if you wish. If you do not usually work in plastic we recommend this as simple and inexpensive.

Send Your "QUICKIE" Entries NOW!

Open to Any Workshop Hobbyist

FIRST PRIZE
$25 U. S. Savings Bond

SECOND PRIZE
10-year subscription to POPULAR HOMECRAFT

THIRD PRIZE
5-year subscription to POPULAR HOMECRAFT

***What is a "quickie"?**

A "quickie" is POPULAR HOMECRAFT's description of a one-night project—any wood, metal, leather, plastic (or other material) project which can be made by an average workshop hobbyist, with average tool equipment, in just a few hours—usually in one or two evenings.

Every workshop craftsman has at least one pet—in the "quickie" class—which he has made in his workshop. The more prolific hobbyists probably have dozens of them.

Well, enter one or more in *Popular Homecraft's* new "Quickie" Contest—and try for these fine prizes, as well as for public recognition in the workshop hobby field.

All you need to do is send us a photo, rough pencil sketch, bill of materials, and some simple step-by-step instructions telling how you made your pet "quickie." Also list the tools and kinds of material.

Don't try to be an author unless you want to. Just give us the basic information in simple language. Our editors will write up the piece for you if yours is chosen.

(To be awarded each issue until further notice)

1) Print or type your name and address clearly.
2) Send entries to: Quickie Contest Editor, POPULAR HOMECRAFT, 814 N. Michigan Ave., Chicago 11, Illinois.
3) Winning entries remain the property of the magazine.
4) If you wish non-winning entries returned be sure to enclose self-addressed, stamped envelope.
5) Decisions of the judges will be final.
6) In case of tie duplicate prizes will be awarded.
7) Entries for one issue cannot be applied to the next issue unless they are re-submitted separately.
8) Contestants may submit as many entries as they wish, as often as they wish—as long as each is made individually.
9) Entries must be postmarked not later than October 5th for the November-December issue.
10) Photograph and sketch must accompany each entry.
11) State the number of hours required to complete your "quickie" entry.

NOTE: The Contest Committee found it necessary to reject a number of fine projects on the grounds that they did not qualify as "quickies" as defined above. Any project which requires more than a few hours to complete is not eligible for entry in this contest.

"Yes, it's lovely, I can make it just like new with Weldwood Glue."

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Firzite
—to give you smooth finishes on fir plywood and other soft woods.

A pre-finishing material that seals the wood pores...tames the wild grain . . . virtually eliminates checking and grain raising. An excellent base for stain, paint or enamel. White or clear. White Firzite provides an easy, low-cost way to achieve "blond," "bleached" or "wiped" finishes.

Satinlac
—to preserve the beauty of all woods.

An inexpensive coating for the proper finishing of Weldwood Hardwood Plywood and similar woods. Clear. No brush marks. Brings out all the natural beauty of wood. Does not yellow or darken with age.

FIRZITE and SATINLAC are available from paint, hardware and lumber dealers. Write us for leaflet on finishing plywood.

Remember Weldwood Glue when you need dependable wood-to-wood bonds. Quick and easy to mix with cold water . . . tremendously strong . . . stain-free . . . rot-proof . . . and *permanent*. At paint, hardware, variety stores and lumber yards. 15¢, 35¢, 65¢, 95¢ and larger sizes.

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United States Plywood Corporation, New York 18, N. Y.

Photo 1—A well made spline joint depends mostly on the proper fitting of the spline. A snug fit is all that is necessary towards a successful joint.

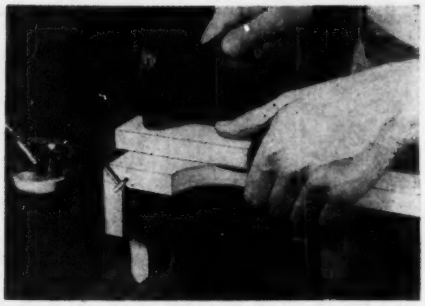


Photo 2—Here is a simple and effective way of closing the splined miter joints on the base. The piece held by the left hand should be pushed forward while tapping the block.

Photo 3—The grooves for the plywood partitions of the lower compartment can be made in a series of cuts on the circular saw as shown being done here to one of the assembly frames.

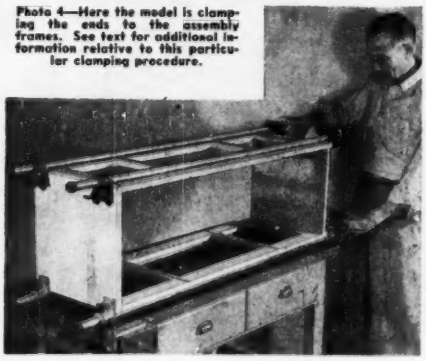


Photo 4—Here the model is clamping the ends to the assembly frames. See text for additional information relative to this particular clamping procedure.

MAPLE GUN CABINET

For the storage and display of firearms—or for virtually any other cabinet use, with only slight modification.

By FRANK HEGEMEYER

HERE is a fine companion piece for the sportsman's collection of rifles, shotguns and sidearms. Its simple design and prudent decoration, its appropriate hardware, present a pleasing overall picture. The gun compartment will accommodate twelve long guns, with generous storage space in the lower compartment for sidearms, ammunition and other necessities. This cabinet is completely dust-proof.

The selection of woods is arbitrary, altho an appropriate choice would be maple, birch or a good grade of pine. The material used here for the sides of the gun case and the ends of the lower compartment was of built-up solid stock reinforced at the glue line with dowels. However, plywood having the same thickness and figured one side to match the rest of the wood can be used with equally satisfactory results. One advantage of veneered stock is that it eliminates milling and gluing.

Construction can begin with the base. Photos 1 and 2 illustrate fitting a spline to the miter and the manner of closing the joint employed on the front corners (as in Fig. 1). The rear corners have a plain doweled rabbet joint (Fig. 2). The joints are further reinforced with corner braces and glue blocks. Braces provide a means of anchoring the base to the assembly frame of the lower compartment. Glue blocks are located midway on the front and rear base pieces as shown in insert 1-A.

Four assembly frames are needed, which are made as designated in Fig. 3.

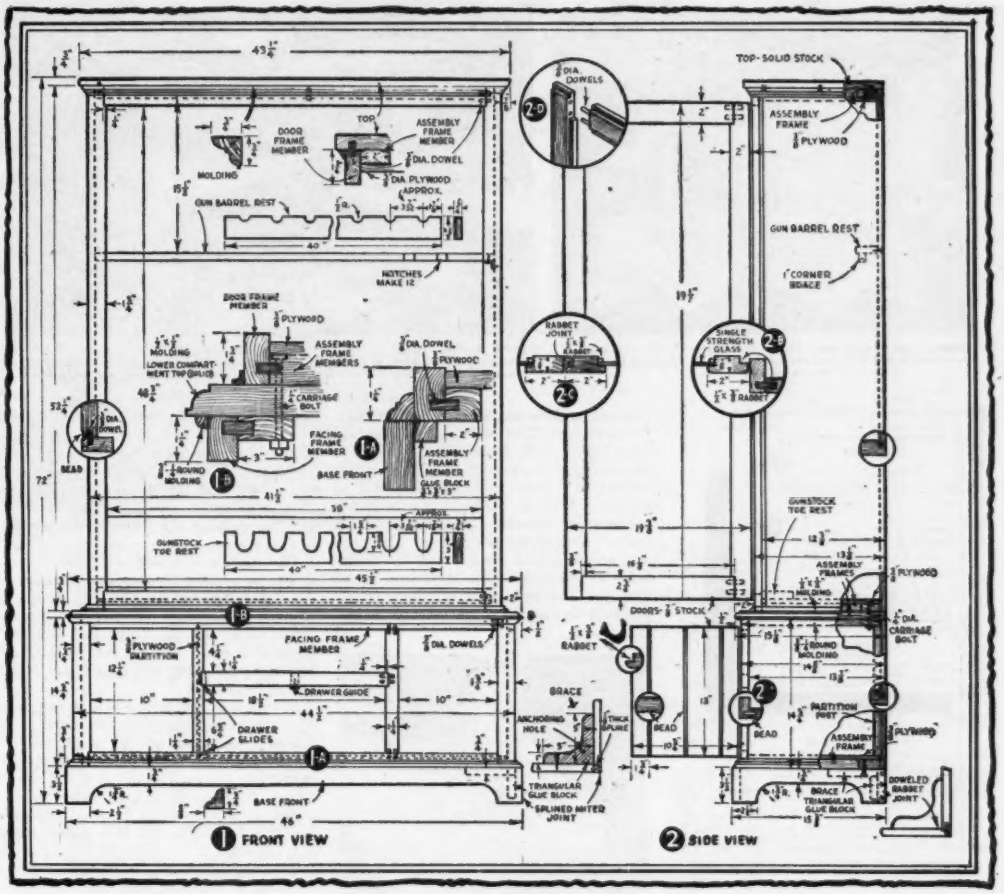


Photo 4 shows one of the frames for the lower compartment being grooved for the plywood partitions and the compartment ends rabbeted for the backing and then assembled to the frames with dowels. In this assembly, see that the 3" wide pieces of the assembly frames face towards the front to permit insertion of a carriage bolt (see insert 1-B) which anchors the gun case to the lower compartment. A bolt is located at each corner.

As shown in Photo 5, the facing frame should be assembled temporarily while fitting the two partitions. Before attaching the facing frame permanently make the beads on the ends as illustrated in insert 2-A of Fig. 2. This beading is best done on a circular saw equipped with a moulding cutter head or on a shaper. Photo 6 shows the facing frame being installed. At this stage the drawers can be made as designated in Fig. 4 and assembled in the manner shown in Photo 7. Next install the drawer guides and runners (Photo 8). 3/8" plywood is nailed to the lower assembly frame to serve as a dust panel in the drawer section and bottoms for the end

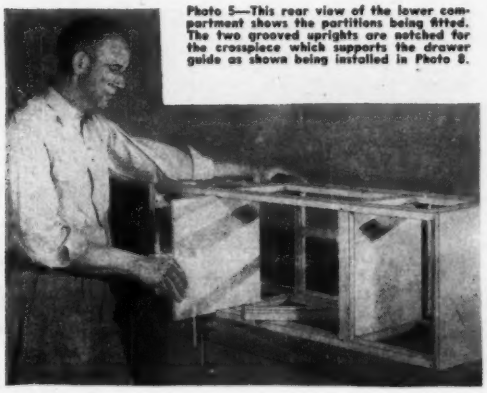


Photo 5—This rear view of the lower compartment shows the partitions being fitted. The two grooved uprights are notched for the crosspiece which supports the drawer guide as shown being installed in Photo 8.

Photo 6—Note placement of the dowels in attaching the facing frame of the lower compartment unit. The grooves saddle the two partitions shown inside.

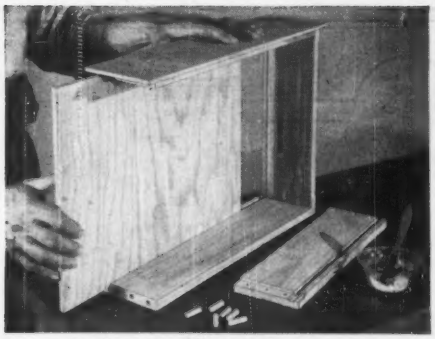


Photo 7—As shown here, the lipped drawer front and back is doweled to one side and the bottom slid in followed by adding the remaining side.

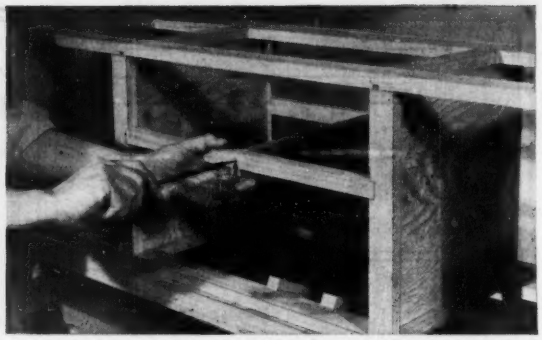
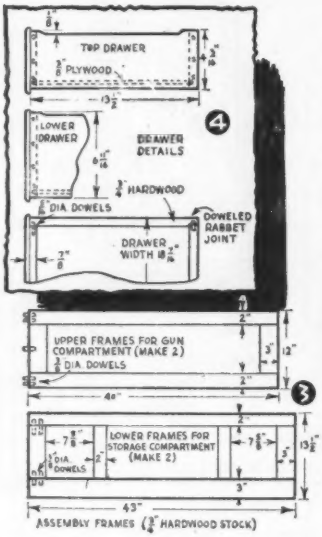


Photo 8—The drawer guides and runners are attached with screws. The two runners for the upper drawer can be connected directly to the partitions. The runners for the lower drawer are simply fastened to the lower assembly frame.



compartments.

The gun compartment can be made next by first rabbeting the sides for the backing and attaching the vertical frame pieces—to which the doors are hinged—and then making the beads in a similar manner as done on the ends of the lower compartment. The sides are assembled temporarily with loose-fitting dowels to the assembly frames and the length of the horizontal frame pieces determined as shown in Photo 9. These horizontal pieces are doweled permanently to the assembly frames, after which the sides are detached and re-assembled for spotting the dowel holes in the ends of the horizontal pieces and the notched ends of the vertical pieces. This manner of assembling the gun compartments permits the use of only four clamps.

Photo 10—The beading on the lower compartment doors is easily done on a circular saw as illustrated here. The saw fence serves as a guide in making the cut.

The lower compartment doors are rabbeted on all four edges and beaded as shown in Fig. 2. This beading can be done on a circular saw as illustrated in Photo 10. The top for the lower compartment has a shaped edge (as shown in insert 1-B) which is attached with dowels, followed by adding the top and backing to the gun compartment. This gun compartment is attached to the lower compartment with carriage bolts, 3/8" plywood (figured 1 side) is used for the backing and for concealing the upper and lower assembly frames.

Inserts 2-B, 2-C and 2-D give complete constructional details of the upper door frames. Rabbeting of the stock for the glass should be done before assembling the frame pieces. Rounding of the edges, where designated, is best done with a shaper as illustrated in Photo 11. Following this operation the four outer edges are rabbeted.

Note in insert 2-C how each door is rabbeted on opposite sides. Before attaching the doors and installing the glass (which can be of single strength) it is recommended the finish be applied first. A maple stain can be applied for the best effect, followed by adequate coats of either lacquer or varnish. Rubbing each successive coat provides a smooth base for the final finishing coat. A pleasing effect is achieved if rubbed to a semi-gloss.

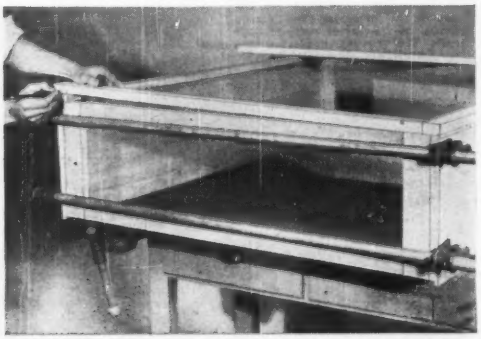


Photo 9—When fitting the horizontal facing pieces as shown here be sure they fit closely in the notched edges of the vertical pieces to which the glassed doors are hinged.

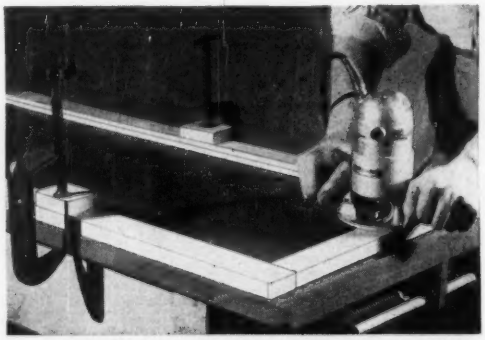
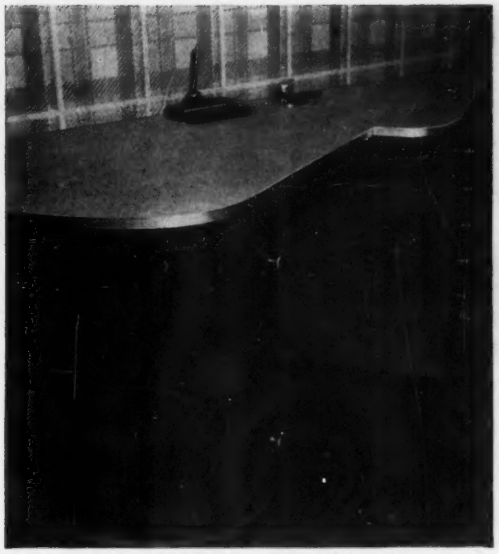


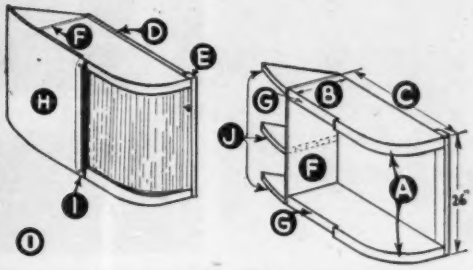
Photo 11—A shaper is ideally suited for rounding the edges of the doors. Note the clamping arrangement for holding the work during the shaping process.

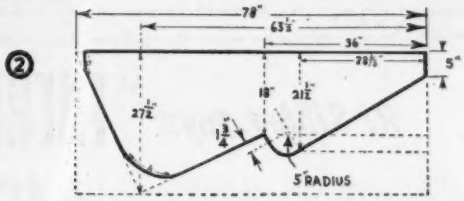
Desk for a Corner

By RODNEY D. PETERSON



"Truly functional" describes this streamlined desk built to fit into a corner.





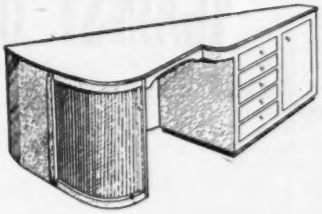
THE modern lines and teardrop top of this desk are especially adapted to the small room with a door opening from a corner. The tapered end fits snugly into a corner and utilizes part of the space reserved for the swing of the door.

An old rolltop is placed on end to form a sliding cabinet. Plywood, ¾", ⅜" and ¼", and white pine stock, 1 x 4" and 1 x 2", were used for most of the other construction. If the desk is to be painted, it can be constructed from used lumber.

Start by rounding up an old rolltop. Take it apart and cut the sliding mechanism so that it, plus the two ends (A, Fig. 1), together will measure 26". Because of variations in the sizes of rolltops, measurements (B) and (C) will vary with each project.

A panel (D, Fig. 1) is cut 26" high and wide enough to allow for a 1 x 4" strip (E). This strip is fastened with screws so that the sliding mechanism can be taken out. Panels (D) and (F) are secured with 1½" finishing nails.

Notches (G, Fig. 1) are cut in the ends of the rolltop section to accommodate a ¼" plywood panel (H). This panel is 26" high and varies in width, depending on the rolltop. It is glued and nailed with 1" finishing nails. A finishing strip (I) is cut from 1 x 2" stock and fastened with screws at the top and bottom.

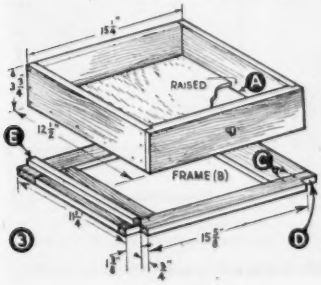


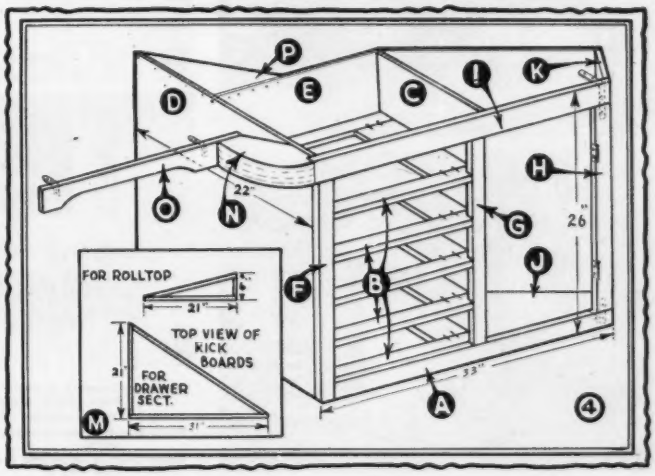
The top is cut from ¾" plywood. Layout measurements are shown in Fig 2. A curve (A, Fig. 2) will have to be cut to conform with the curve of the particular rolltop used. Curve (B) should form an approximate right angle with the back edge and should meet the side edge in a gradual curve that balances curve (A). Three ribs (J, Fig. 1) cut to the same curve as the top are secured to the back of the rolltop cabinet and form supports against which to glue and nail panel (H, Fig. 1).

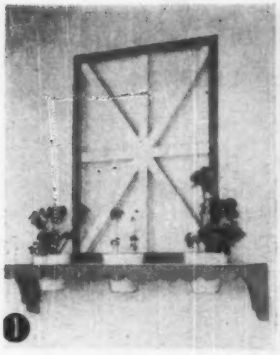
The top is now glued to the cabinet. "C" clamps, if available, hold the two sections together until the glue has hardened. Screws are inserted from underneath and up into the top to insure a strong union.

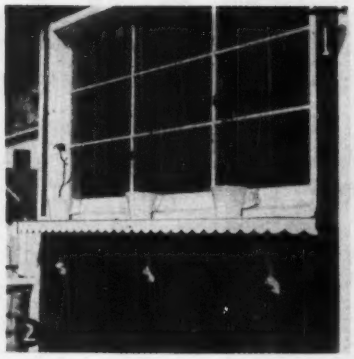
Five drawers are made for the cabinet which fit under the tapered end of the desk. Drawer construction is shown in Fig. 3. Stock, 1 x 4" (¾" x 3¾" finished), is used for the sides, front and back; ⅜" plywood for the bottom. Rabbet joints, ¾" x ⅜", are cut at both ends of the front piece to receive the side pieces. The bottom is held by nails driven thru the back and sides and then sunk. It is not secured flush with the bottom edges of the sides but is raised 3/16" so that

(*Continued on page 58*)









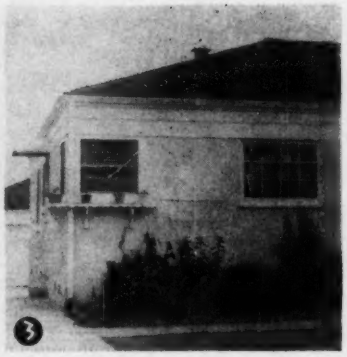


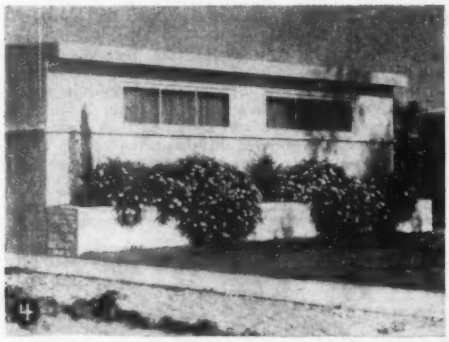
Photo 1—A dummy window with flower pot shelf relieves the monotony of this blank garage wall. (See Fig. 1.)
Photo 2—Various designs of valances and brackets are applicable to this type of pot shelf, in which the pots sit on top of the shelf instead of in holes, as in Fig. 1.
Photo 3—Installed under a corner window of a small house it gives a bit of distinction.

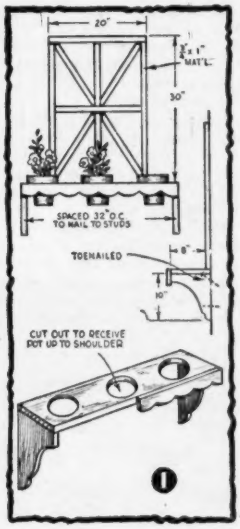
Hi Sibley says: "THERE OUGHT TO BE A LAW AGAINST DRABNESS"

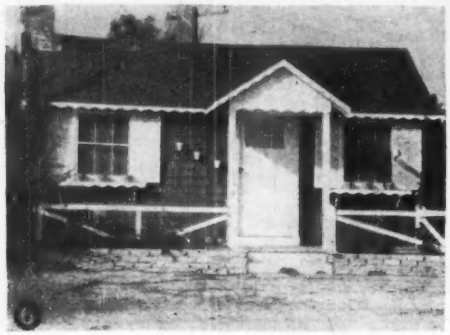
FOR a trifling outlay and relatively little labor you can lift the face of your home — by judiciously placing simple flower boxes and shelves.

The dummy window and pot shelf in Fig. 1 shows how to break up the severity of a blank wall, in this case on a garage. The "sash" is simply nailed to the wall, while the shelf brackets are spaced so that they can be spiked thru to the studs. In standard practice these are spaced 16" on centers, and can be located by tapping the wall with a hammer, or drilling a small hole.

Various designs of valances and brackets are given in Fig. 2. For a ground box along the edge of a patio or terrace, see Fig. 3. The bricks are laid on concrete footings, the space between them being filled with gravel and rich loam above. Where the box is built close to a house wall, and air space should be left between, as in Fig. 4. Bottoms of this type box are always left open for drainage.







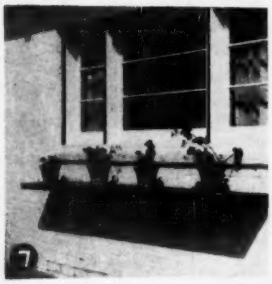
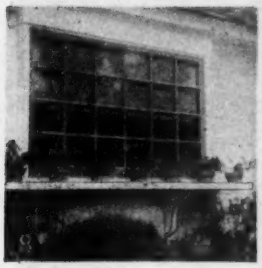
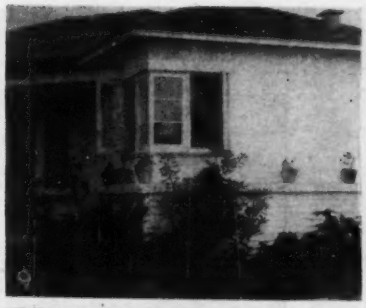
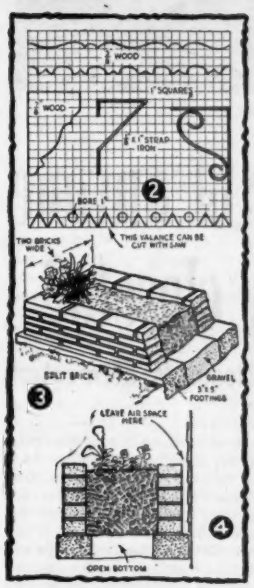


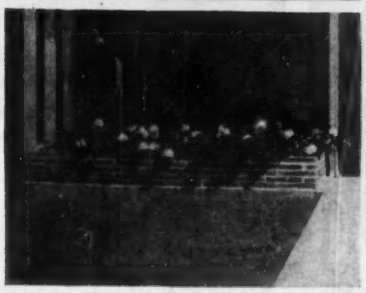
Photo 4—Concrete block in this flower box harmonizes with lines of small house. Blocks are painted white.
Photo 5—A very pleasing effect on corner of front entry.
Photo 6—Stairstep arrangement on a trim beach cottage, painted red and white.
Photo 7—Plain strap iron brackets, bent in a vise, support this simple shelf. (See Fig. 2)

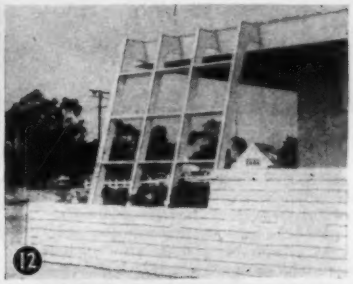
★ ★ ★

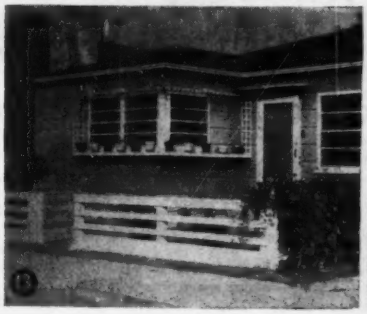












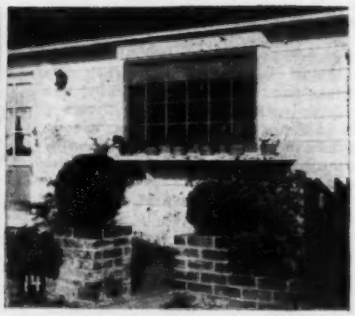
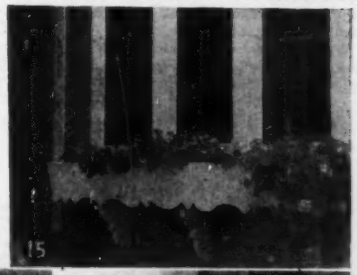
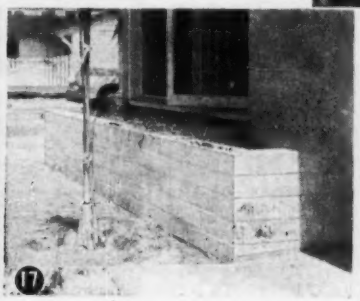
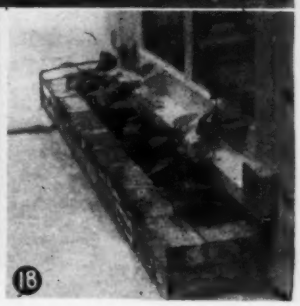


Photo 8—Two extra heavy brackets hold up this long shelf before the big window.
Photo 9—A brick ledge makes an interesting pot shelf.
Photo 10—Arizona flagstone makes an exceptionally handsome ground box along this high garden wall.
Photo 11—A ground box of split brick on an extension of the porch floor. The bottom is open to the natural soil, and filled with gravel for drainage. (See Fig. 3.)
Photo 12—A modernistic framing over the brick box built into the garden wall.
Photo 13—Effective arrangement of corner shelves, with small trellis.
Photo 14—A single shelf enhancing the appearance of a view window.
Photo 15—Scroll-sawed box relieves austerity of gaunt windows.
Photo 16—When the house is too close to the street for a satisfactory lawn, the problem is pleasantly solved with these low ground boxes.
Photo 17—A not very happy design; too much unrelieved brick, and no air space between it and wall. Moisture will damage the house wall. (See Fig. 4.)
Photo 18—This photo shows what can be done in the tiniest space, but this, too should have had an air space.







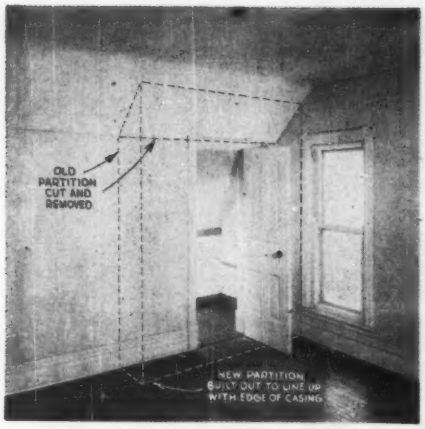


Photo 1—BEFORE.

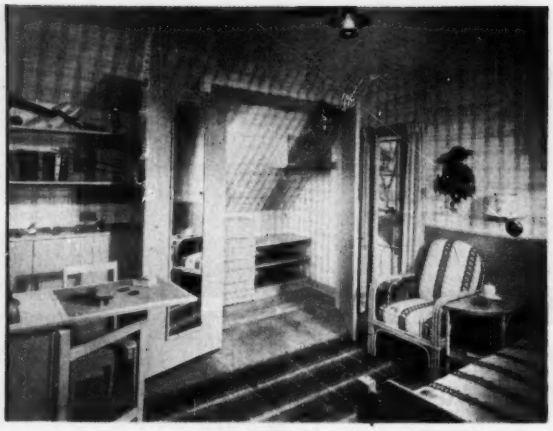


Photo 2—AFTER.

Did you ever hear of anyone having too many closets?

No. 7 in "Show-How" Series on Home Modernization

By FRANK CULHANE

Associate Editor

All photos courtesy U. S. Gypsum Co.

MODERN housewives demand more and better arranged clothes closets than their mothers did. They are more conscious of the waste of time and the back-breaking labor of "picking up" which is the penalty of rooms which lack sufficient storage space. The problem of providing this space is a pressing one for a home owner with a growing family. He hesitates to attempt any remodeling that will mean additional expense and he naturally shrinks from the thought of cutting into walls or partitions. Besides, it's human to accept things as they are, and we tolerate inconveniences that could be changed by comparatively simple and inexpensive construction.

Closet space does not need to be large to be efficient if it is carefully planned for the specific needs of the user. Numerous articles in magazines show closet arrangements that occupy mighty little space. Many of these arrangements are simple in construction. Most of them are well within the limits of skill and equipment of many of our readers.

We have presented illustrations of closet arrangements in previous issues, but room layouts vary so widely that it is difficult to suggest any single solution which has widespread application. In this issue we present a number of typical situations and show how closet space was added to existing rooms. These solutions have proven satisfactory in daily use.

There are two general methods of construction used in this type of work. One utilizes studding covered with plaster or "dry wall" wallboards to make a permanent partition. The second is "case construction", where the closet is built up as a case or wardrobe without alteration of the existing structure. These cases are built in, fitted and fastened to existing walls. In some instances, the cases are built separately and placed against the wall in units which can be moved or removed later. Cases of the latter type are useful in rented buildings or places where their use may be temporary. This type of construction works well where a workshop hobbyist can make his units in a home workshop.

Typical Conditions

Typical conditions which exist in rooms

Photo 3—LEFT
Closet under construction: 1—Recessed edge Sheetrock. 2—Carpenter utilizes scrap for narrow inside space. 3—Old casings removed. 4—New partition. 5—Dado predecorated Sheetrock. 6—Rough opening 2½" to 3" over width of door. 7—Heat register.

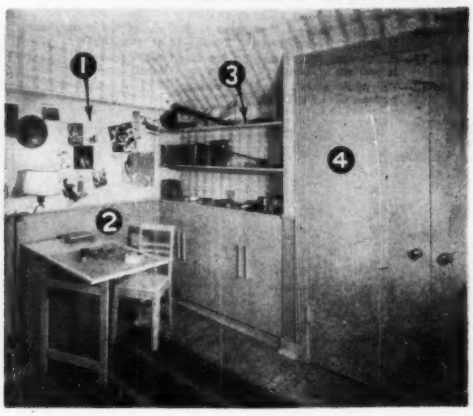


Photo 4—RIGHT
1—Insulating board for bulletin board. 2—Predecorated Sheetrock wood veneer face. 3—1" x 10" shelves. 4—Stock flush doors.

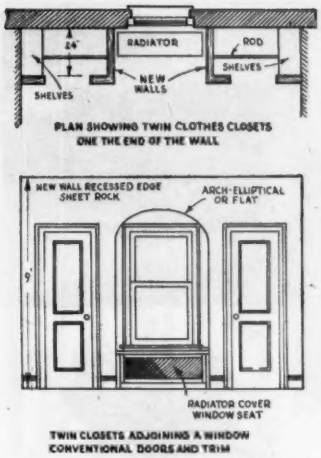


Fig. 1

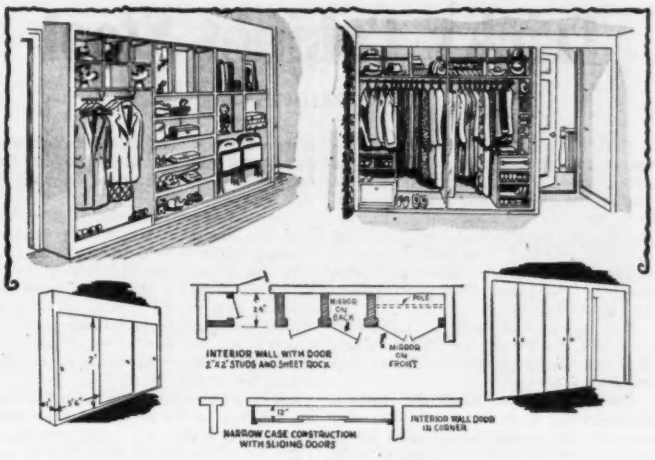


Fig. 2

where closets are added are: 1—A small closet under a sloping roof is inadequate and inaccessible because of low headroom. The solution (Photo 1 to 4) is to move partition out to increase headroom. In this instance a portion of the partition was cut thru and removed and a new face built out 12" (Photo 1). Two doors make entire space accessible (Photo 2). The nook left on the wall provides cabinet and shelf space (Photo 4).

2—Space is available on a blank wall at one end of the room. A very interesting modern solution of this condition was the construction of the twin closet and vanity dressing table described in the April 1949 issue of *Popular Homecraft*, page 240.

3—(Fig. 1) A wall with a window approximately centered and with a radiator below the window. This is a space that is used frequently. Here closets were placed in pairs across the end of the room. The wall space above was furred down and finished as a wall. The opening between the closets was spanned, in this instance by an elliptical arch. A flat arch would look better but here it is necessary to match other openings in the room. The doors and trim match the rest of the room. The modern tendency is toward having flush doors or to cover old doors with ⅛" hardboard to simulate a flush door.

4—Side walls with a door opening. The location of the door determines the design of the closet. On long walls a vanity or dressing table is placed between the units for convenience or to reduce the cost of doors and cabinet work. (Fig. 2)

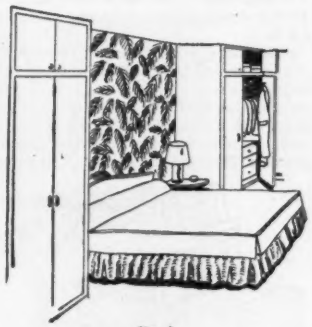


Fig. 3

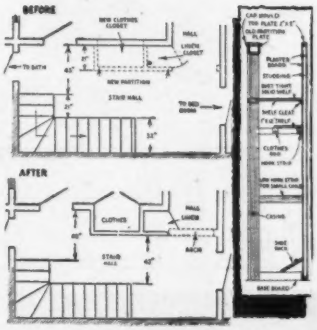


Fig. 4

5—Solid wall adjoining the head of the bed. In this interesting solution (Fig. 3) twin wardrobe cases are placed in the corners of the room to make an alcove for the bed. There are some intriguing possibilities in this arrangement for placing shelving lights, etc., at the head of the bed between the cases.

6—Wardrobes and closets installed in stair halls. There are numerous possibilities for adding closet space in stair halls. This is especially true where the halls are wide in some places to accommodate a turn in the stair. In the instance shown here (Fig. 4) a portion of the old partition was removed and closet construction in the stair hall which provided efficient storage for a boys bedroom and for a convenient linen closet to serve the adjacent bedrooms. The walls in the boys bedroom were finished in knotty pine pattern wallpaper. Therefore, the face of the closet was designed to match the doors are ordinary 1" x 6" D and M glued together and

(*Continued on page 42*)

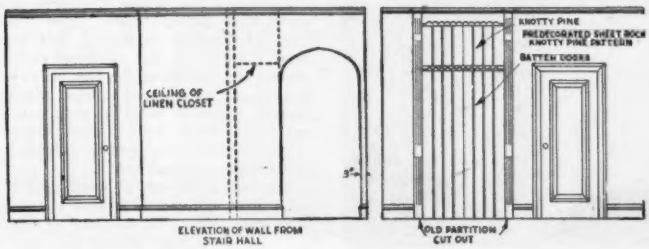


Photo 5

Tricky Cabinet Stool

By G. H. BILLINGHAM

ONLY short pieces of lumber are required and narrow stock can be used to advantage—an important item these days. The unusual cover enveloping the ends and part of the front is a built-in feature. Its potential uses vary and you probably can add to these: Shoe polishing, stool, sewing aid, foot rest, portable tool holder, step, bench for the children, parking place for a few toys, etc.

Make the ends of ¾" x ⅞" stock (½" will do, if other sizes are not available), 9" square. Draw the pattern with a sharp pencil on your wood.

Cut grooves on inside for bottom, remembering that pieces are opposites and must be matched accordingly. These grooves can be made on your circular saw, holding the bottom end up against the fence, with saw blade at proper height. Use a dado saw for a one-cut job, or make several runs when using standard blades. Run pieces thru in order, with each saw adjustment so that widths will be equal, and a check-up will not be necessary.

If power equipment is not available, lay out the groove for placement, depth, and width (depending on thickness of lumber, Masonite, etc. that is available to you for use in the bottom). Give your marking gage a workout for these dimensions.

Clamp each end in turn to a flat surface and brad a thin strip with one edge right on one of the groove lines. This will act as a guide for first cut. Then move the strip and re-brad on other line for second cut. Remove strip and make several saw cuts in between to correct depth. Remove surplus stock with a chisel, using a mallet if striking power is needed. Clean out with a file if necessary.

If you have a small piece of sheet metal that you seem to have been saving for this purpose, saw cuts will replace the grooves.

Cut outline close to the line of legs. Your plane will speed matters. The use of edge tools is a special aid in smoothing surfaces when power sanding equipment is not available.

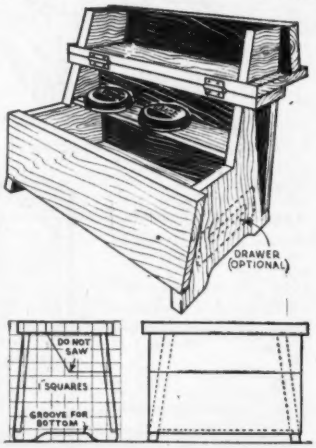
"Round" lower corners, edges and bottom, but do not sand surfaces that are to be joined. Saw as indicated for the cover section cut-out. Use a fine-tooth blade. A power jig saw is ideal. Caution: Do not complete the cut across the grain at this time.

The sides are of ½" stock, 8½" wide (can be glued up of narrow strips in contrasting colors if you like), 13" on top, 12½" on bottom, marked out ¼" from each end. Set your slide on an angle for the end cuts if you own a power saw. Round ends and bottom. One of these pieces is cut into two pieces, 5" up from the bottom, leaving top section approximately 3½" wide.

Set your completed parts in place, holding the legs (ends) at correct angle and measure for length and width of bottom. Two thin sticks can be used or you can draw full size sketch on paper. Make the bottom to size.

If you would like to have a shelf or drawer design it now and make provision for it.

Assembling, which we look forward to, can be handled in several ways depending on your experience, material used, and purpose for which the unit is intended. Start with the full size side and two ends, with bottom inserted into the special grooves. Then put 5" side section in place,



checking to see that it is even with the saw cut.

Next add top side section. There was an allowance of ⅛" in width on side pieces, and extra stock can be removed with a plane after frame is assembled. Test with a square for straightness, sight across surfaces for "twist" and do not sand these top areas, where the top fits on.

Select proper length nails. If glue is used spread it carefully. Nails should be set, and holes eliminated with filler. Certain types should be sanded as soon as applied, others require a drying period.

Screws make a more substantial method of fastening and also improve the appearance. Flat head screws, neatly spaced, can be set flush with the surface or counter bored and covered with a wooden plug. Plugs can be made by hand in a wood turning lathe or purchased according to size.

Round head screws are easier to use. A screw driver that fits the job is half the battle, and aids in achieving a workmanlike appearance.

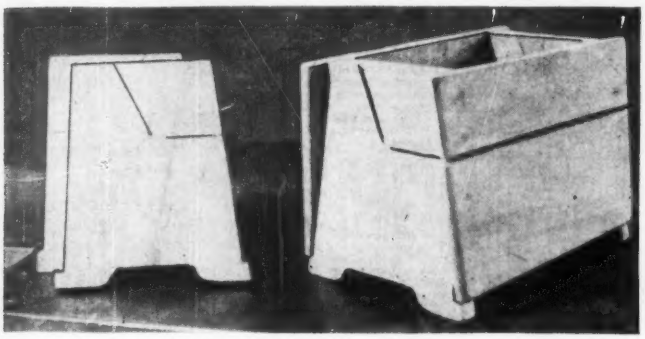
If you use glue entirely, careful clamping is necessary. Surplus glue should be removed as far as possible with sticks and damp cloth. Allow plenty of time to dry, and unloosen clamps evenly in order not to strain the unit. There are several satisfactory adhesives on the market. If you do not have a favorite, try one of the casein power mixtures.

Stand on a flat surface. If it rocks, shim up so that unit is steady. Take a thin piece of wood or cardboard; and draw lines parallel to the working surface, around the bottom of the legs, as shown in sketch. Plane, or file to lines, working toward center of wood in each case to avoid splintering. Sand all sharp corners.

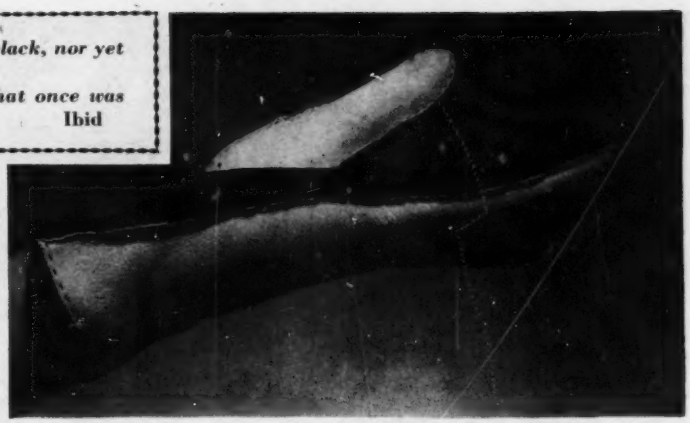
Note that the leg span is substantial, providing a practical base.

The top of ¾" or ⅞" wood measures 13⅞" long and should extend about ½" over each side. This also can be glued-

(*Continued on page 47*)



"Wear seemly gloves; not black, nor yet too light,
and least of all the pair that once was white." Ibid



GLOVES

Picture-story for leathercrafters

A better-than-satisfactory project; for yourself or for Christmas giving

IF you've been working on belts and billfolds, albums and portfolios—vary your diet and try your skill on this attractive item of wearing apparel. Gloves for yourself—or as a Christmas gift—are not difficult, as this step-by-step picture story shows. You can make them any size—and for men, women, or children—simply by changing the pattern and colors accordingly. First step, of course, is the pattern.

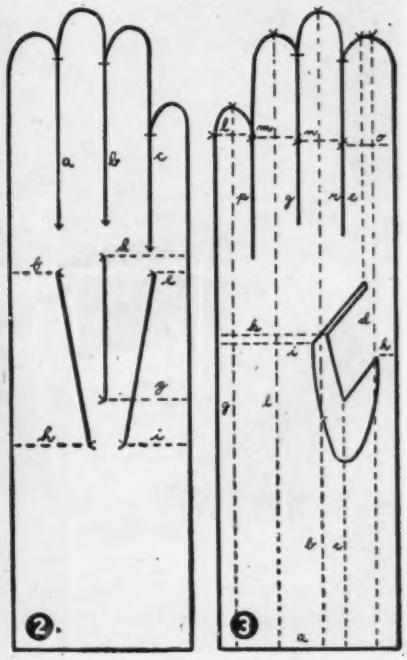
For this particular style you will need 1½' of white and 1½' of black leather; this will make one pair, size 6¼ to 6¾. Let's go:

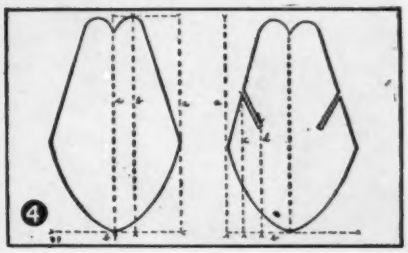
1. First measure right around the hand on a level with knuckles; make pattern accordingly.

2. Pattern, right side: *a* and *b* 2.12"; *c* 2"; *e* and *f* ¾"; *d* and *g* 1.6"; *h* and *i* 1.4".

3. Pattern, wrong side with cutout for thumb: *a* 3"; *b* 10.10"; *c* 4.4"; *d* 10.4"; *e* 4.2"; *f* 10.4"; *g* 9.2"; *h* ¼"; *i* 1.9"; *k* 1.13"; *l* 0.10"; *m*, *n* and *o* ¾"; *p* 1.12"; *q* 2.8"; *r* 2.8".

4. Thumb pattern, right side: *a* 5"; *b* 3"; *d* ½"; *e* fold 4.11". Wrong side: *a* 5"; *b* 3"; *c* 3/5"; *d* 2.7".





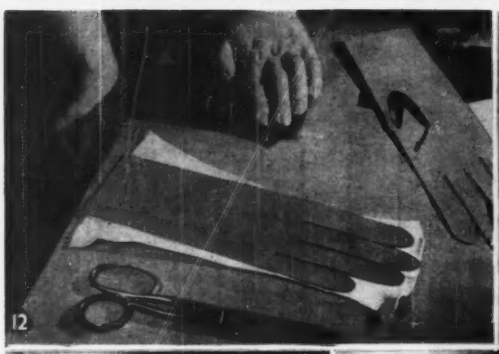
5. Place leather together, inside out; roll in damp cloth. The top side of leather must not touch damp cloth.

6. Place leather on table, with narrowest part at top. While still damp pull with balls of your thumbs over edge.

7. Cut off 11" of leather lengthwise.

8. Pull this piece in opposite direction. Do same to both kinds of leather.

9. After pulling out leather which now is approximately 7" wide, place pattern over it; allow ¾" to overlap and draw glove on leather, marking width with a line.



10. Turn leather over at this line and cut as shown. This assures both gloves being same size; do with both colors. White is for back of hand, black for the palm side.

11. Next, cut down the middle of the pieces that have been cut off.

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12. Again pull leather lengthwise, so that it covers the whole of the finger. Now it cannot stretch any more. Place pattern of the back of the glove on the white leather, pattern of the palm on the black.

13. Outline around the pattern—exactly.

14. Patterns of the back and front of the hand must be traced twice to obtain a left and right—with thumb pointing first to right, then to left.

15. Put thumb pattern with the cut on both sides (lower part of thumb) on black leather and the top of thumb pattern on the white. Trace around patterns, and cut out. Both thumb pieces then are divided exactly in the middle as shown by the dotted line of the patterns.

16. Sew black and white thumb piece together with running stiches. Then cut 12 strips of black leather ½" wide and 4" long.

17. Place each white glove back to black palm so that forefinger touches forefinger, middle finger to middle finger, etc. Stitch together along both sides up to tips of fingers on right side, with running stitches.

18. Now draw the 3 seams on the backs.

19. Stitch seam lines into very narrow pin seams, using fine running stitches.

20 and 21. Sew thumb to sewn glove with running stitches. Thumb with notch on

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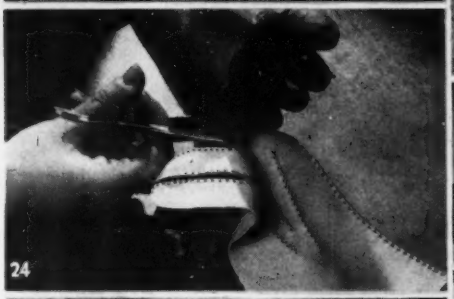
23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right side is for left hand, and vice versa. Thumbs also are sewn with small running stitches.

22 and 23. Backs and palms already have been sewn together up to the tips of the fingers. Next sew a narrow strip of black leather that was cut out to each side of the fingers of the back of the hand. Begin at top of forefinger so that two strips are sewn to each side of middle and ring fingers, and one strip to sides of forefingers and small fingers.

24. The fingers of the backs of the hands are longer than the corresponding fingers of the palms. Measure shorter fingers of the palms from top to bottom by corresponding fingers of the backs of the hands and make very small cut.

25. Place together the strips for the forefingers and middle fingers, middle and ring fingers, ring and small fingers, and cut away the strips held together in a slant on a level with the small cut.

26. Now sew the other sides of the strips to corresponding fingers of flat of the hand as illustrated.

27. Round off the edges of the gloves.

28. Cover the rounded off parts with narrow black strips.

29. Sew the strips down on the inside with small hemstitches; trim on the outside close to the piping with small running stitches. *That does it!*

Peg Coat and Hat Rack

By ROBERTA L. FAIRALL

HERE are two designs for a handy household accessory that ought to be good for a laugh in the bar or rumpus room. The materials need are ¼" plywood panel, three pieces of ¾" stock for the heads, three lengths of ¾" dowel, some poster paint and varnish.

The plywood background is sawed 1' 0" x 2' 6". The design for the heads is drawn on paper first to facilitate enlargement of the drawing, then the back of the paper, blackened with soft lead pencil. Finally, they are traced to the wood and jig sawed out. Holes are drilled ¾" in diameter at a 30° angle at the position of the noses, and three 3¾" lengths of dowel cut.

The heads are glued and nailed to the panel in the positions indicated in the squared drawing and the dowel noses glued in.

BILL OF MATERIALS

HAT AND COAT RACK (THE BOYS)

1	¼" x 1'-0"	2'-6"	long
3	¾" x 5½"	8½"	long
3	¾" dowels	3¾"	long

HAT AND COAT RACK (THE GANG)

1	¼" x 1'-0"	2'-6"	long
1	¾" x 5"	7½"	long
1	¾" x 7"	8"	long
1	¾" x 6"	7½"	long

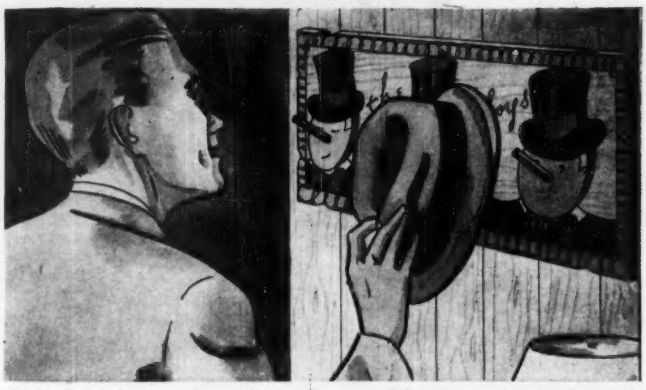
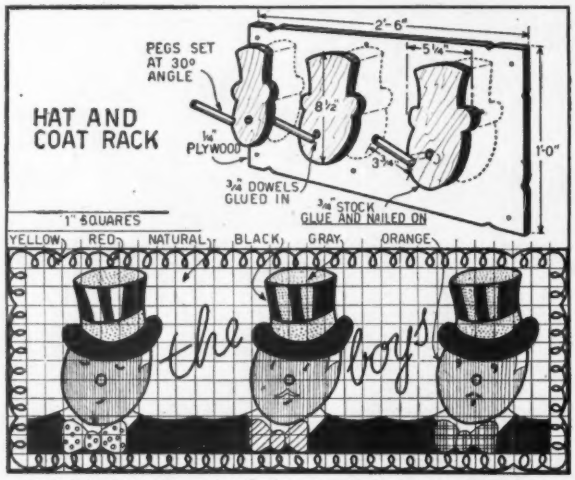


Fig. 1—Hats and coats are hung on the turned-up noses of these three comic figures framed on a section of plywood and fastened to the wall.

The novelty is sanded before painting with water color poster paints on the raw wood. These colors will not adhere if any filler has been used. By using poster paints which dry almost immediately the entire design and all colors may be applied at once. The entire novelty should be given a protective coat of clear varnish or shellac. Fasten to the wall with six screws.

The alternate design is similarly constructed, except that the pegs are glued in to indicate cigars. Note the illustration showing the pegs as installed.



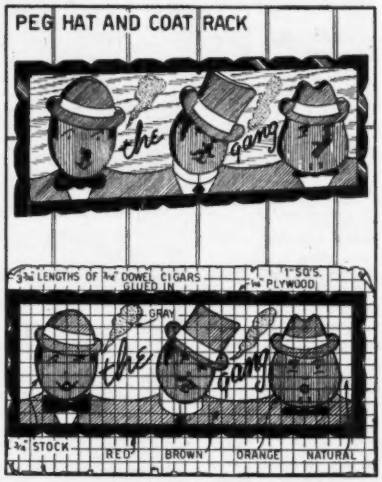


Fig. 2, Left—Construction and design for peg rack. Fig 3, Right—Dowel cigars are hat and coat hangers. The wooden faces are fastened to a plywood panel which is hung on the wall.

Suitable Machinery for Furniture Making

By WILLIAM W. KLENKE
Author, Designer and Mastercraftsman

PART 1

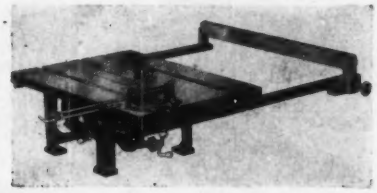


PHOTO 1

PHOTO 2

CRAFTSMEN today are fortunate to have at their disposal so many different portable, motorized woodworking machines. I can remember when I was a boy of fourteen years the thrill I experienced in being able to turn out a little "whatnot" on the foot power lathe in the home workshop belonging to the father of my chum. It was hard work to push the pedal for an hour or two and, with that motion, it required a great deal of skill to do clean turning.

Circular Saw

If I could have only one outfit, my first choice would be a circular saw. With it you can rip, crosscut and cut miters, bevels, tenons, grooves and rabbets. With some types, you also can do shaping, sanding, boring and mortising.

There are three types of circular saws: the tilting arbor, the tilting table, and the radial saw. Each of these types will be pictured and briefly explained.

The Tilting Arbor Saw—(Photo 1)

It is constructed so that the arbor holding the saw blade can be tilted 45° to the right, the saw table always remaining stationary and level.

The Tilting Table Saw—(Photo 2)

Constructed so that the saw table can be tilted to a 45° angle. This type is preferred by many craftsmen because it can be put to many uses. With it, using a special cutterhead, moldings can be cut; boring, mortising, sanding and grinding can be done. Often the tilting table saw is made with a jointer unit attached which, operated from the same motor as the saw, is more compact and economical.

The Radial Type Saw—(Photo 3)

The only one of the three types that does all cutting from the top, where the work always is clearly in sight. Since it cuts from above, it is a very safe saw to use. While ripping a piece of lumber, the operator can leave his work when only half the cut is made; the wood will not move. It is never forced back at the worker, since the cutting action has a tendency to feed the wood into the machine.

With a radial saw, long pieces of stock can be handled more easily. That is, when crosscutting, the wood remains stationary while the saw passes over it making the cut, much as you would saw lumber by hand. With this saw, all kinds of cuts can be made, as with the other two types. It also makes a good shaper for strip moldings, etc., and is a good router—Photos 4 and 5.

Sharpening the Saw Blade

True up all teeth by gently touching an oilstone against the teeth as the saw blade revolves. This puts all the teeth in line. The points will be the same distance out from the center. Next, the teeth must be set to give clearance to the cut —(Photo 6). Now file the teeth to a sharp point and to uniform shape and size. Remember to file at right angles for a ripsaw, and at about 15° for a crosscut saw. Combination saws are hollow ground, so need no setting of the teeth.

Ripping

Always use the fence when ripping stock, and have the saw blade high enough to project, if possible, a little above the wood being cut —(Photo 7). Test the ripping fence, to make sure that it is parallel with the saw blade. Rip narrow strips of stock from both ends, or use a stick as a pusher (Fig. 1) to avoid cutting your fingers. The hinge joint on an ordinary 2' rule works fairly well.

Taper Ripping

Make a jig, as shown in Fig. 2, for cutting tapers on table legs and the like. Make several steps, to take the stock in the different stages of completion. The first cut is made with the straight edge against the jig, using the first step; then use the next step for the remaining two sides.

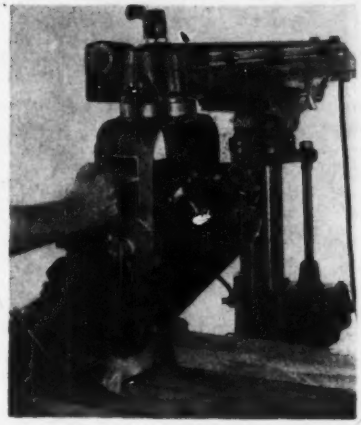


PHOTO 3

PHOTO 4

PHOTO 5

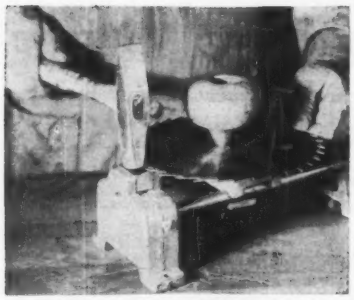


PHOTO 6

PHOTO 8

PHOTO 9

Resawing: It often becomes necessary to cut thick lumber into thinner pieces. This operation is known as resawing—(Fig. 2). If the wood to be cut is soft and easy to cut, set the saw blade as high as possible above the saw table. Make a cut from both edges, being sure to keep the same side of the stock each time against the fence. If the cuts do not meet, complete the cut on the band saw—(Photo 8) or by hand. In the event the stock is hardwood and difficult to cut, instead of raising the sawblade to its full capacity, the cut will have to be made a little at a time.

Bevel Ripping

Ripping on the bevel can be done by tilting the saw blade itself (tilting-arbor, and radial-saw types) by tilting the fence (if you have a tilting fence), or by tilting the saw table, depending on the kind of circular saw you possess.

Another method is to use a special beveled wood strip fastened to the fence.

Ripping Very Thin Stock

Clamp a flat board on top of the saw table, set at the correct distance (thickness to be cut) from the fence (the saw blade must be below this board). Then start the machine and gradually raise the saw blade so as to cut its own throat in the board. This way, the saw blade will fit snugly against the board, thereby preventing the thin strips that are being cut, from working their way down the machine and being ruined.

Making Concave Cuts

This operation is a severe strain on the saw blade, since the cutting is done at an angle. Be sure to have plenty of set to the blade, and make only a small cut at a time, running the job in two or three operations. Follow the general directions (Fig. 2) and practice on a scrap piece first so as to get the correct curve, which is governed by setting the guide strip at different angles.

Combing

It is possible to rough out the greater part of many moldings by the process known as combing (Fig. 3). First, carefully draw the profile of the molding on one end of the stock; make the saw cuts on all flat surfaces. Then proceed to make a series of cuts at varying heights. The final shaping of the molding is done by hand with gouge, hollow, round, and rabbet planes, and the molding is sandpapered by folding the sandpaper over curved blocks. A good craftsman always has a large variety of these blocks on hand, so that he can match the curves on almost any molding.

Grooving

The cutting of grooves and dadoes is simple, and much the same as for all circular saw work, except that a special groover is used. On account of the extra heavy cut made, due to greater width of cut, it is often necessary when making deep and wide grooves, to perform the operation with more than one cut.

To avoid accidents or damage to the stock, it is advisable to have on hand for the throat piece, a number of pieces of wood containing grooves of various widths. This applies to tilting arbor and tilting table types. Never operate a

(*Continued on page 43*)

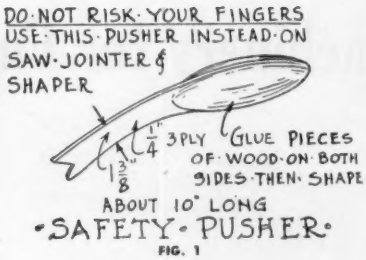


FIG. 1

PHOTO 7

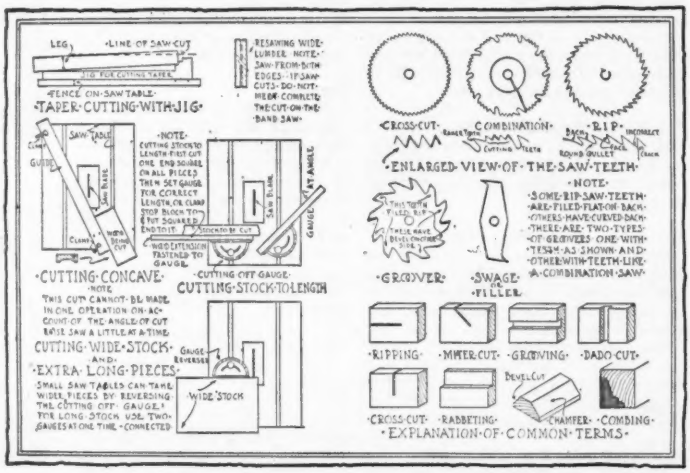


FIG. 2 FIG. 3

You are invited to send your inquiries on home repair problems—interior and exterior, as well as on items used in the home. They may concern construction, heating wiring plumbing, painting, etc., and may involve wood, metal, leather, plastic, glass or any other material. All inquiries will be answered as promptly as possible, either in this column or by personal letter. Be sure to enclose addressed, stamped envelope when writing to Mr. Graffam.

FIX IT YOURSELF

FOR FUN • FOR PROFIT • FOR ECONOMY

By PERRY S. GRAFFAM
Associate editor

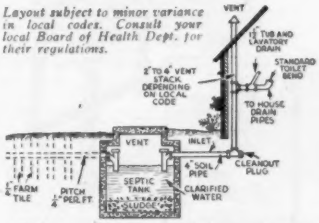
Q. I own a lined oak kitchen set which is in need of having the finish restored. Can you give me some practical advice on how to go about it?

A. The set should be sufficiently sanded to remove most of the old filler. Use fairly coarse sandpaper such as No. 1 for this purpose. The surface should be well brushed to remove all of the dust, cleaning out pores well. Filler coat of flat white paint is then applied, allowed to partially set, then rubbed off across the grain with a cloth. Complete finish with a coat of flat or gloss varnish as desired.

Q. I am planning on building a home and would like to know about laying a sewerage system. What is a French drain? Are there any good books on plumbing?

A. There are several good books on plumbing. "How to Design and Install Plumbing" by A. J. Matthais, Jr., is recommended. Chapter two deals with private disposal systems. An illustration of a system that is different from those described in the book but is practical to build is pictured below.

Layout subject to minor variance in local codes. Consult your local Board of Health Dept. for their regulations.



This system was used for a six-room ranch house. A concrete tank was poured about fifty feet from the house. The tank was 5' x 7' x 6' deep with 6" walls. The top is reinforced with reinforcement rods and about 6" thick. A small opening was left for cleaning purposes, with a concrete slab for a cover. The house plumbing is connected to the septic tank with a 4" soil pipe, leaded at the joints. This pipe also is carried to the roof for a vent for both the house plumbing and the septic tank. It also acts as a vent for gases from the field sewerage system. The outlet from the septic tank is fed into the main drain system with eight branches, each about 40' long. Trenches 2' wide by 20" deep are partially filled with crushed rock, sand or gravel. 4" farm tile is laid end to end. Pieces of roofing about 4" wide are laid over and around two-thirds of each joint. The pipe is covered with crushed stone, after which the trench is filled with a good grade of soil. As the water drains off quickly and always is flowing when in the field sewerage system, there is no danger of freezing.

A French drain is a hole filled with rubble, stones, etc.

Q. My problem is how to make a secret compartment or drawer for flat silver?

A. Two such secret compartments were described in past issues of *Popular Homecraft*, February-March 1941 issue described a clock case with a secret compartment; March-April 1932 described an Old English table with a secret compartment. An ornamental clock case and bud vase were mounted on a box-like base which contained the secret compartment. The box was made from ¼" material. The material for the front, back and two ends was ripped out to a slight oversize, jointed to exact size and made

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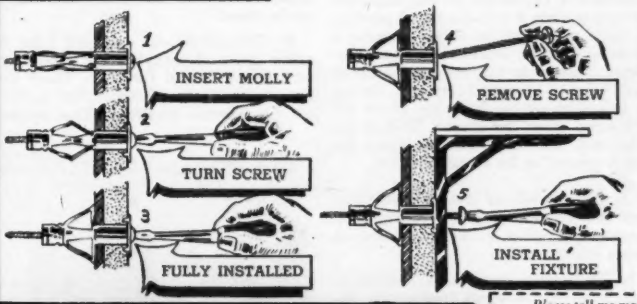

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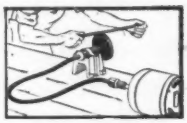

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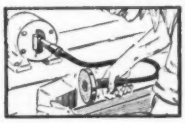
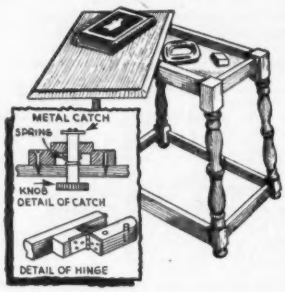


into a box 13⅝" x 4". Either the ordinary box lap joint or a miter joint may be used. Glue joints firmly and reinforce with three-cornered fillets. After the joints have set, fit the inlay borders. Next cut the top and bottom of the box to project all around. Top and bottom sizes are 4⅜" x 14". Use some type of hidden hinge and make two catches as indicated in plan showing detail of latch. The latch control projects thru the bottom of the box just enough to make it possible to be manipulated.



The English type table was made with a secret compartment in the top. The top panel was made so that it could swing to one side when the concealed catch was released, uncovering a greater part of the space.

To build such a compartment the table is made similar to any table with a pull out drawer, except in this case the drawer is omitted and the top is hinged to swing out. Complete the table, all except attaching the top panel. Obtain a strong hinge not over 1¾" long and use it to attach the top to one of the end pices as near one corner as possible. Fasten a block to the underside of the top, and another to the end piece and the hinge to these blocks. Attach another block so that it acts as a stop, limiting the movement of the top in either direction. It is necessary to provide some means of anchoring the other end of the top piece, so that the hinge will not be broken if someone picks up the table by the top. Some sort of catch will serve. That used on the table illustrated consists of an oak pin arranged to move up and down and engage in a depression on the underside of the top when it is in the closed position. A metal plate with an oblong opening is fastened over the depression, and another piece attached to the end of the pin so that, when it is turned thru 90°, the top is locked securely. A spring keeps the pin down when unfastened, so that the edge will not strike the pin when the top is swung to the closed position.

Q. Can you tell me if there is anything that can be used to fill in scratches in marble and what material is used to polish same?

A. To remove scratches in marble, if you have only a small item to be refinished such as a table top, it would be less expensive to have it resurfaced and polished by a marble contractor and finisher. They have the large grinding and polishing stones necessary to do such work. It can be done by hand by first removing the scratches with an abrasive material, "Abrasive Grain", a fine powder that when mixed with water and rubbed with some flat object such as a block of wood will help to remove the scratches—if you rub hard and long enough. Use a circular motion and rub evenly all over the marble. To polish, wash off thoroly, removing all the abrasive powder. Repeat the rubbing process with fine pumice and water. Pumice comes in four grades; any of the grades will do. If you wish a high gloss, repeat the second process, using powder rouge. These materials may be purchased at wholesale only, at Summers & Maca, 3600 S. Oakley, Chicago, Ill. In some cities these materials can be purchased in small quantities at the local glass supply house.

Q. How would I finish outdoor plywood when using this for lawn cut outs? Where can I purchase suitable plywood for lawn cut outs? After polishing copper, what shall I put on it to keep it from tarnishing? Where can I purchase metal and plastic house numbers at wholesale?

A. Most of the damage is done to the plywood when moisture seeps in thru the edges. They should be painted with a good exterior paint. Varnishing the surface with marine varnish will make it weatherproof. The new plastic product "Phenoplast" is almost indestructible and when applied to a surface coats it so thoroly that hardly anything can damage it and it would resist all kinds of weather. A letter to the Phenoplast Co., 115 E. 23rd St., New York, N.Y. would acquaint you with the name of the nearest dealer.

Aetna Plywood & Veneer Corp., 1731 Elston Ave., Chicago, Ill., and H. L. Wild, 510 E. 11th St., New York City sell plywood. Transparent lacquer is used on copper to keep it from tarnishing. For metal numbers write Willard Bronze Co., 3608 Colerain Ave., Cincinnati 23, Ohio, and Erco Mfg. Co., 2368 N. Elston, Chicago, Ill. For plastic numbers try Acme Products Co., 406 N. Van Buren, Green Bay, Wis., and Gets Molding Corp., 4600 W. Huron, Chicago, Ill.

Q. Recently my daily newspaper carried a short article and pictures of animal cut outs for children's rooms and nurseries. Can you tell me where I can purchase the animal cut outs and how to apply them?

A. The animal cut outs you refer to are a series of barnyard and circus cut outs for walls and furniture. These are handcrafted by Don Towsley, well known for his Disney creations. The leading

citizens of barnyard and circus are represented in the series. Turkeys, hens, roosters, pigs, dogs, cats, lions, elephants, clowns, seals, camels and even mice are a few of those available. Except for the small animals, chicks, ducklings and mice, these cut outs are 14" x 14" and their bright oil paint colors give them a gay appeal. They are washable, will not curl or fade. Not decals, Menagarie cut outs are applied easily on any smooth or semi-smooth surface. It's only necessary to moisten with a damp cloth their special glue back and the surface to be covered by the cut out, then smooth the cut out on. Write to Menagarie and Co., 10818 Santa Monica Blvd., Los Angeles 25, Cal., for further information and the name of your nearest dealer.

Q. I have made several cutouts of plywood for lawn ornaments. Now I am afraid they will split & come apart when exposed to the weather. Is there any way I can prevent them from doing this?

A. (1) To make your plywood cutouts water resistant, coat them with marine varnish, & this you can get at the Murphy Varnish Co., 224 W. Wharter St., Newark, N.J. (2) You can buy waterproof plywood from Plywood Products Corp., 191 Chrystie St., New York.

Q. I noted in one of your recent publications the helpful suggestions on the repair of concrete. I wonder if you could give me more detailed information on the making of concrete blocks. By information I mean materials, forms, consistency of mixture for best results, etc. Also, if convenient, the approximate cost per block or square foot of material.

A. If you will write to the secretary of the American Portland Cement Assoc., 45 Grand Ave., Chicago, Ill., he will send you everything you wish to know about making concrete blocks. There will be no charge for it. Also write to the Atlas Portland Cement Co., 420 Lexington Ave., N.Y. for information on High Early Portland Cement.

Q. I am making a water softener. The problem I have is the brine tank. Could you tell me where I might purchase one, or how one may be made to be free from salt corrosion? I have a small oil drum which I could use, but salt would act on it. A friend of mine told me the U.S. Navy used a certain type of paint for this purpose, but does not know where to purchase it. Could you tell me?

A. For a salt corrosion-resistant paint write to Devoe & Reynolds Co., 44th St. & 1st Ave., N.Y.; & to the U.S. Navy, Washington, D.C. The latter may send a formula to you.

Q. Can you give me the name & address of a dealer who sells bamboo, or any products of this type? I am interested in buying them to make my own recreation room & bar.

A. You can buy bamboo in all sizes from Flexo-Products Co., 1100 West Washington, Chicago, Ill., & cocoa mats & matting (if these will serve your purpose) from American Mat & Matting Co., Inc., 67 Wall St., New York.

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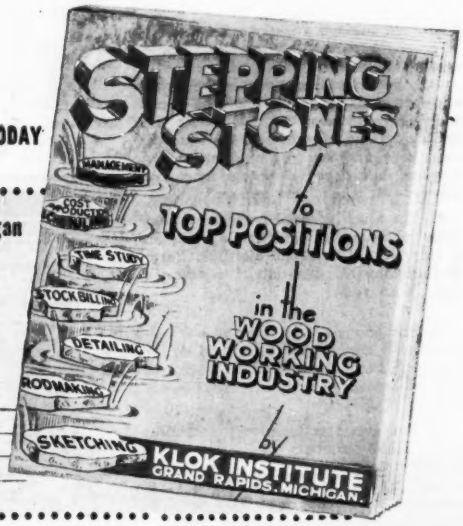

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BANDSAW BLADE CASE

By FRANK HEGEMEYER

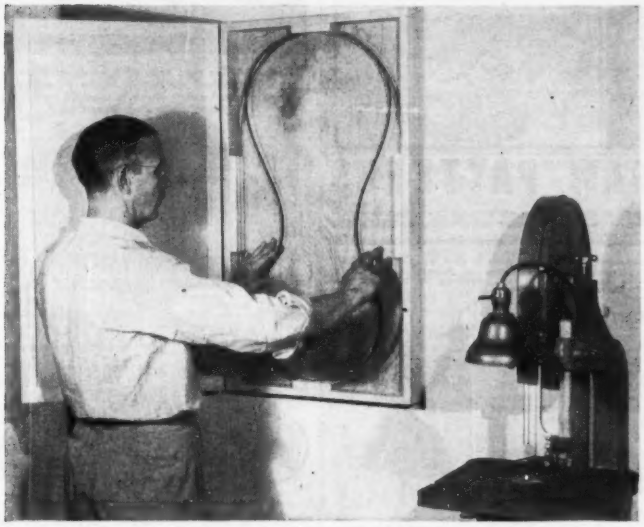

Photo 1—This case is ideal for holding your extra bandsaw blades. The arrangement of the retaining blocks permit instant selection of each individual blade size.

This easy-to-make case protects your bandsaw blades. Hints for lengthening their useful cutting life.

IT generally is the custom of bandsaw owners when changing blades on their machines to form a triple loop in the one taken off when storing it for future use. As I see it, the only advantage of folding a blade in this manner is that it requires a minimum of storage space.

A wrong twist of the wrist during folding, however, can put a kink in the blade which is sometimes difficult to remove. Any kinks in a bandsaw blade, however slight, can affect its operating efficiency. Another thing to consider when looping a blade is that the teeth are bound to come in contact with other teeth—and that is not helpful to their cutting qualities. While this is of little consequence if a blade is folded carefully and hung on a nail in storage, it is unwise to store it in a drawer with other metal objects.

Much has been said of the proper manner of folding a bandsaw blade, but how many times have you seen in print a method which explained the unfolding of a looped blade? Probably never! It is a comparatively simple matter to loop a blade into smaller coils, but it is during

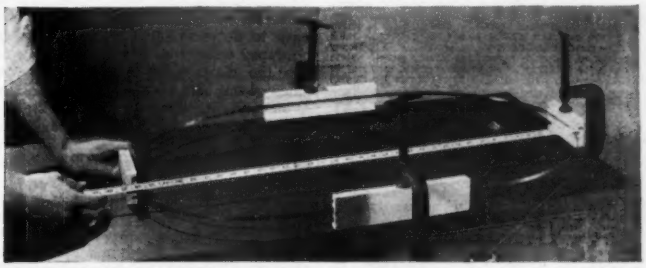

Photo 2—As described in the text, this illustration shows the manner in which the case size is determined for blades used on 3-wheel bandsaws.

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★ Delivered in 1' x 1' x 4' package, with assembly hardware and directions. Bolt and screw holes pre-drilled.
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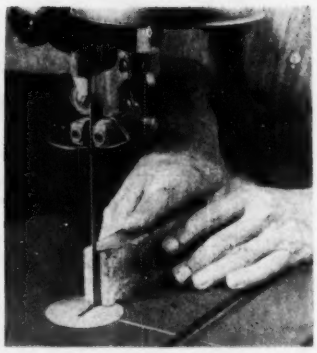

Photo 3—The rear side of a blade must run true if efficient cutting is to be expected. Here a coarse grit stone is used to remove slight bulges or humps.

JIG SAW PATTERNS

Jig Saw Patterns for lawn ornaments—ash tray stands—garden circus—corner brackets—order portfolio No. 65 for 30c

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Hundreds of patterns of life-like figures of children, birds, dogs and cats; also comical figures of cops, gnomes, elves, in all imaginable poses and sizes. Many patterns of ash tray stands, pretzel stands, children's furniture and corner brackets. These patterns illustrated in our 30-page portfolio No. 65. Send 30 cents.

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Complete catalog No. 75 lists and prices all domestic and foreign woods, veneers, special tools, etc. It also shows how to make pictures with wood veneers, gives simple directions for inlaying, overlaying, wood burning and chip carving. Catalog 40 cents.

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(Open Sat. until 3 P. M.—Phone ALgonquin 4-6056)

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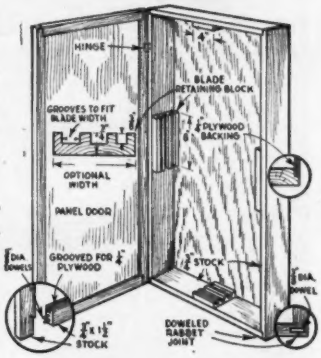

unfolding that one has to pay particular attention. Because it is difficult to portend in which direction the loops will uncoil, injury to the face or hands from the sharp teeth may occur. Many bandsaw owners open the blades with their hands held behind them, which is a safe and wise practice.

The folding of bandsaw blades can be dispensed with by making a blade case. This keeps your blades orderly and makes size selection easy. Photo 1 illustrates the case in use. The blade is placed in its groove in the upper retaining block and bent as shown to seat in the lower block; the sides are allowed to come to rest in the longer retaining blocks. Each blade can be removed individually without disturbing the others.

The drawings illustrate the general construction of the case. The size to make for your particular requirements is easy to determine. If your machine is equipped with two wheels, simply measure the distance between the opposite sides of the blade while it is on the machine and the dimensions from the top of the upper wheel to the bottom of the lower wheel. These dimensions denote the necessary width and height measurements of a case to fit your blades.

Bandsaws having three wheels require a different procedure. This is done as illustrated in Photo 2, where the retaining blocks are arranged on a benchtop to form the blade into an oblong shape with a width approximately half its length.

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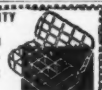

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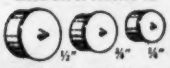

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KENKRAFT
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The depth of the case can be made to accept any number of blades. When making the retaining blocks see that the grooves are $\frac{1}{16}$" wider than the blade it is to hold.

Not only is it wise to provide protective storage for your bandsaw blades while they are idle, but it also is good sense to avoid any mistreatment which might shorten their life. A bandsaw blade is a delicate piece of steel which undergoes a tremendous amount of strain during its normal use. Premature blade breakage can result from a number of causes. I haven't the space here to list them all, but some of the main reasons why a blade breaks is improper tension, faulty adjustments of the guides and rollers, feeding the work too fast into the blade, twisting a wide blade in small abrupt curves and overtaxing the blade beyond the point where it begins to show dullness.

When a blade has been used for some time and it suddenly acquires a thumping affect against the work indicates that the brazed or welded joint is beginning to come apart. When this occurs the blade should be taken out for re-brazing. Occasionally a re-brazed blade thumps against the roller supports, which is a sign of an improper weld. Usually a defective weld shows a hump on the backside of the blade which can be removed if it is not too severe. This is best done while the blade is in motion. Start the machine and gradually move a coarse-grit stone towards the back of the blade until the hump or bulge lightly strikes

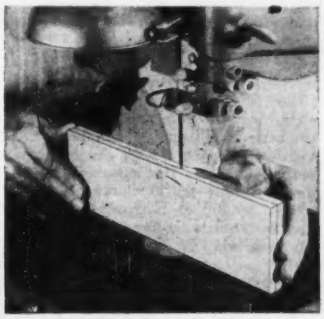

Photo 4—Do not attempt to cut wide thin boards as shown here without a support to hold the work vertical. Blade breakage can result if the board is forced over sideways, with possible injury to the worker's hands.

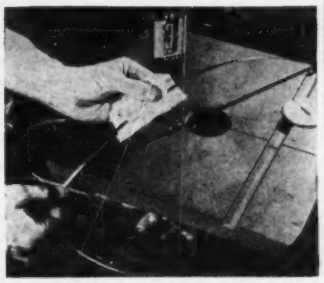

Photo 5—Blades which are taken off the machine and stored for future use should be given a liberal coating of oil. This protects them from rust, especially on blades which lay idle over an extended period.

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the stone. Allow the machine to run for a few minutes and, making occasional test cuts during the process, until the thumping effect is eliminated.

Photo 4 shows a board being sliced in two in a dangerous manner. Aside from the upper guide being too high, there also is an absence of a support to keep the work from toppling over sideways. This can easily break the blade or cause an injury to the operator's hands.

When changing blades, it is always good practice to apply a liberal coat of a rust preventive on the blade taken out (Photo 5) before it is stored away. Rust can be harmful to the blade. When the blade is again put in service the oil should be wiped off.

Wood and Tree By-Products

★ ***About 3-7 thousand cocoanuts are needed to make a ton of copra, dried interior flesh of the nut.***

★ ***A Mobile, Ala., process produces plastics from sawdust and other wood waste. Tests show these equal to or superior to others in competitive price fields. Molding qualities are said to be good, maximum water absorption only 1.05%, tensile strength about 4,750 psi, flame self-extinguishing.***

★ ***Northwestern Electric Co's Lincoln plant, Portland, Ore., burns "yellow coal," as they call hogged fuel: sawdust and small bits of wood from lumber mills.—Morris A. Hall***

Clothes Closets

(*Continued from page 27*)

nailed to a frame. They have stood the test for many years of rugged service.

Predecorated Sheetrock wallboard is available in knotty pine finish. This material is available in paper finished wood grain for all the standard woods.

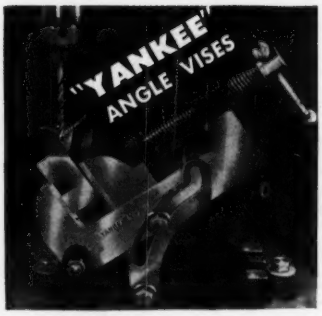
Closet Dimensions

Closets are built as narrow as 12" in wardrobe type cabinets where the clothes are accessible from the front. In these narrow types the clothes are hung in a sliding clothes carrier suspended from a shelf. Carriers are available in 12", 14" and 16" lengths for narrow closets. Other sizes to 42" are used for deep closets. The minimum width for standard closets is 22" where the hanging pole is parallel with the front of the closet. A width of 24" to 30" is more satisfactory.

Hanging poles and hook strips are centered at 5'6" from the floor for adults. The dimension from the wall is 12" to the center of the pole. In children's closets shelves are made adjustable and the pole is placed 3' from the floor with the center from 8" to 10" from the wall. Men's hats require a space 14 x 12 x 8". Men's shoes require a space 12 x 9 x 4½" to 5" high. Slanting shoe racks for men are made of 1" x 12". The slant is 4" and a cleat is nailed to hold the heels 3½" from the top. Metal fixtures for both men's and women's shoes are available.

Dressing Tables at Windows

In crowded locations windows face neighboring houses. Dressing tables at windows are too conspicuous. A solution for this condition is to cover the entire lower sash with a mirror. This does not interfere with the operation of the sash, at the same time, it does provide privacy.



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SNAP-ON SNAP-OFF NEW SANDER

This new exclusive sander is of an entirely new principle.
Changes sandpaper in less than 10 seconds.
No special wrench or discs required.
Specify No. ½" Shaft complete $3.95

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Suitable Machinery for Furniture Making

(*Continued from page 34*)

groover with an open throat. The groover is indispensable for all drawer and panel construction, and for cutting grooves for splines, dadoes and other joints. The radial saw is excellent for this, since the joint lines are always visible.

Crosscutting

The crosscut saw or the combination saw should always be used for all sorts of cuts across the stock. The gage can be set to cut at any angle desired up to 45°.

Cutting Stock to Length

For cutting stock to length, first cut one end on all pieces square and true. Set the stopblocks (on the gage), or clamp a stopblock in place, so that all pieces will be cut alike. The end first cut square is placed against this stopblock—Photos 9 and 10. All sorts of angular cuts, dadoes and the like, can be made by the same method. Accurate miter joints for picture frames and panels can be cut this way; and the joints, if properly made, are ready to be glued together.

Cutting Long and Wide Stock

By reversing the miter gauge (Photo 11) wide pieces can be cut; and by using two gauges fastened together as one, longer stock can be cut to length. As stated elsewhere, for cutting long stock to length, the radial saw has the advantage over the other types.

Miscellaneous Suggestions

It is advisable to clamp a scrap block against the fence when cutting across the grain, to prevent binding at the saw. Be careful to give sufficient clearance between the saw blade and the fence, to prevent small pieces from working backward and flying into your face. Either the right or left side of the table can be used for all sawing.

PHOTO 10

PHOTO 11

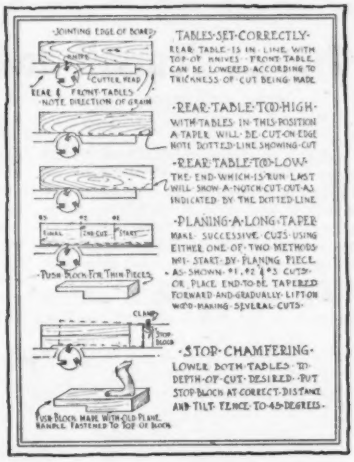

FIG. 4

Jointer

A good jointer is indispensable to the craftsman, since with it surfaces are quickly and easily made smooth and true. Perfect edge-to-edge joints ready for gluing also can be made. All sorts of bevel cuts, tapering, chamfering, making of rabbets, etc., are within the range of this useful machine.

PHOTO 12

Setting the Knives

To be successful with the jointer, the knives (usually three in number) must be kept sharp and set, all projecting exactly the same distance. This not only insures a smooth cut, free from small ripples, but gives balance to the cutterhead, thereby reducing vibration and increasing the life of the machine.

To set the knives, use a large magnet (Photo 12). First place all three knives in the cutterhead and tighten the nuts slightly. Now raise one blade to line up exactly with the top of the rear table and touching the magnet, which will then hold it in place. Scribe a mark on the magnet just where the knife touches. Clamp a strip of wood across the table

Free...

NEW POWER TOOL AND WELDING EQUIPMENT BOOK

Beautiful rotogravure 52 page book contains hundreds of illustrations, descriptions and specifications of Wards well-known Powr-Kraft line of tools for wood and metal, and a complete line of Electric Motors. Also shows the nationally-known Logan Metal Lathes, Mall Electric Saws, Burke Milling Machines, Burgess Hand Tool Kits, deluxe quality Beaver Power Tools, etc. Book features the popular Shopsmith, a complete 5-tool-in-1 workshop. All tools may be purchased on convenient monthly payments at Wards Mail Order Houses, Catalog Order Offices or Retail stores.

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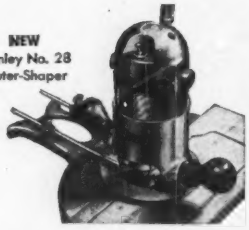

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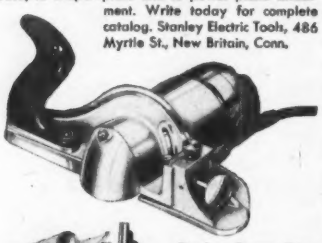

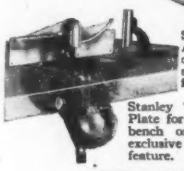

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Stanley Table Shaper Plate for mounting on bench or table. Has exclusive tilting arbor feature.

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HARDWARE • HAND TOOLS
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so that it is against the magnet, preventing it from moving. Tighten all nuts, being very careful not to move the knife by so doing. In like manner, set the other knives. Be careful when setting them to keep the ends of all three knives in line; this is important for cutting good rabbets.

Adjusting the Table

Before doing any cutting, be sure that the rear table is exactly in line with the top of the knives. Use a wooden straight edge for testing to avoid damaging the sharp knives. Lower the front table slightly, or to the thickness of the cut desired. It is always better to make several cuts rather than one, when cutting away a large amount of wood; this gives a smoother job and is safer and easier on the machines.

Always work against a fence and be sure that the guard is in place. For bevel cuts, the fence should be tilted. It is possible to run end grain on a jointer only on the wide pieces (never try narrow stock), and even then the cut must be very slight and run slowly, especially at the extreme end. When jointing thin stock, use a pusher (Fig. 1). Never run stock less than ½ x 1 x 8" in size. Keep even pressure on the wood as it passes over the knives, releasing the pressure from the front table and transferring it to the rear table. Fig. 4.

To Sharpen the Knives

Altho it is possible to touch up the knives while they are in the machine by honing with a fine oilstone, if the blades are nicked or dull, grinding becomes necessary. Since the knives are very narrow, freehand grinding is difficult, altho it can be done. So it is advisable to make a saw cut in a piece of wood to fit the knife, and run this across a grinding wheel that has been put in a small circular saw or disk sander or use a cup grinding wheel in the drill press. Whatever method is used, the angle for grinding the knives must be about 36°. Since these knives are made of high-speed steel, the cut each time must be slight to prevent burning. After grinding, whet the edge with a smooth oilstone until very sharp. It is always advisable to have an extra set of knives on hand in the event you cannot stop for grinding at just the time you need the machine.

The next issue (November-December) of Popular Homecraft will contain Part 2.

Protect Yourself and Your Wrenches

By H. LEEPER

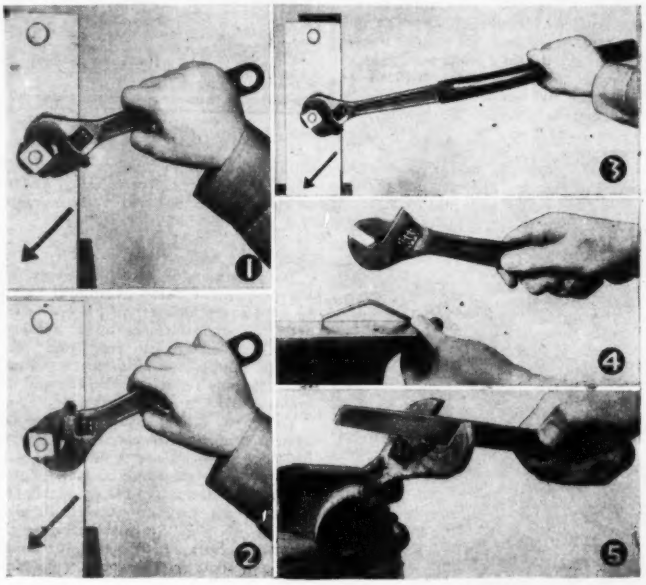
MANY wrenches are damaged and the users injured by improper practices. An adjustable wrench of the type illustrated should be used as in Photo 1 when tightening a nut, with the direction of pull on the wrench downward. Such action forces the jaws of the wrench more firmly on the nut.

Do not use the wrench as shown in Photo 2, as this is the reverse condition of Photo 1 and permits the wrench jaws to slip off the nut.

Use wrenches of the correct size for the job and do not use a piece of pipe on the handle for more leverage (as in Photo 3) unless you wish to strain or break the tool.

Wrenches should not be used as hammers, as in Photo 4. This weakens the tool and may fail in some other operation.

Wrench jaws should be kept in good condition, using a file when necessary (Photo 5) to make the edges of jaws flat.



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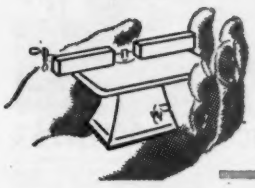
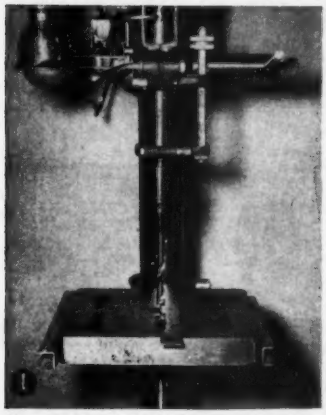
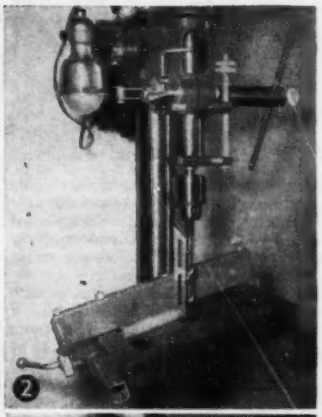
CARE AND USE OF POWER MACHINERY

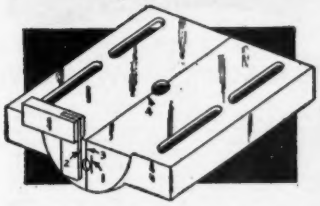


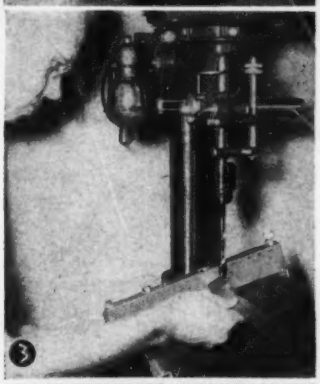
By PAUL E. WAUGH

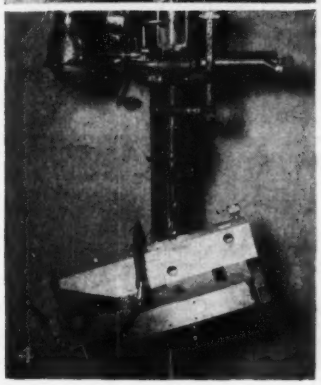
Angular Drilling Made Easy











PAUL E. WAUGH suggests this method of setting up your drill press to perform angular drilling quickly and accurately. If you've ever had any "off angle" drilling to do, you know it is difficult to obtain desired angles without considerable trial and error. Well, here's your answer.

If your table swings or pivots, remove and very accurately locate and scribe a line across its face—which is in the same plane as the center of pivot hole. This can be done easily as shown in the sketch. First, with the use of a small square, scribe lines 1 and 2 at outside edges of pivot hole, divide distance between them and scribe line 3 in the same manner—which theoretically will pass thru the center of the hole. Then, by squaring on rear face of table, scribe line 4 across face of table, being careful to have line 4 meet line 3 at edge. Scribe line 4 very deeply so it will not be easily worn off by use.

Now, reassemble your table to the drill press. When the table is in horizontal position the scribed line 4 always will be directly over the pivot point of table.

$39.50 F.O.B.

Kalamazoo, Mich. Price includes motor rail, belt, pulley, mitre gauge, fence, splitter, guard—less motor. Extensions $3.50 each.

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Compare these features and we think you'll agree the new 3001 is today's outstanding circular saw value!

BIG SAW FEATURES!

★ TILT/ARBOR CONSTRUCTION — table and work are always flat for safe angle sawing.
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★ BIG CAPACITY. With a 2¼" depth of cut, and a 12" x 16" table that has 7⅛" area ahead of blade, the 3001 handles a broad range of work.
★ PRECISION-GROUND GREY-IRON TABLE. Heavy cast iron table is rib-braced and reinforced for absolute rigidity. Precision ground top assures smooth easy sliding surface.
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★ TABLE EXTENSIONS AVAILABLE. Exclusive, grey-iron grill type extensions, measuring 6¾" x 16"; can be added to the 3001 at low cost. Add one to right side and you can rip to the center of a 24" panel. Add one to each side, and table area is increased to 25½" x 16". Tops are precision ground.

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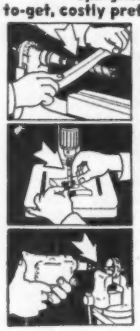

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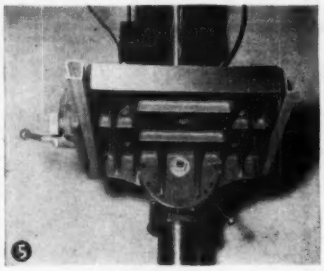
With this aid it is easy to set up for angular drilling. Simply line up point of drill, as shown in Photo 1, with a steel rule which is held on scribed line. This puts center line of drill directly over center of pivot point of table. If an odd angle is desired, tilt the table until it meets the bevel square set at this desired angle—(Photo 2).

Next, set your adjustable fence the distance from center of drill you desire to drill from face of work—(Photo 3). If

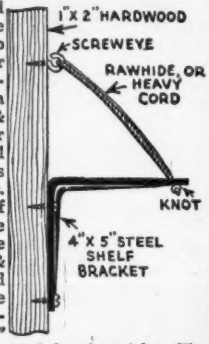


5

you have no fence on your table, a guide block clamped to the table will do, provided it is kept at right angles to the scribed line. You are now ready to clamp work in place and drill, as shown in Photo 4.

Photo 5 shows another advantage with the use of the scribed line on table. If your drill press is drilled in rear apron for vertical and horizontal positions to be used with locating pins, you can add additional holes for 30°, 45° and 60° positions, because the scribed line will enable you to accurately set center of table on pivot under drill.

Simple Method of Building Stilts



WHEN asked by my little nephew to build him a pair of stilts, I figured out an easy way & fastened a pair of small steel shelf brackets to the sticks. These shelf brackets have a girder-like construction & cannot bend under the weight of children. 1 x 2" hardwood was used for the sticks. The foot straps are optional & can be omitted. —Arthur Trauffer.

WHITTLE WOODS Make Woodcarving Easy

Kit contains soft pine contour cut on four sides, templates, illustrations and complete instructions for carving original and amusing figures from the Gay Nineties. Introductory offer includes kits for "Officer Riley" and "Schultz The Bartender" both for $1.00 postpaid.

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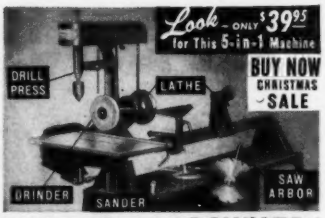

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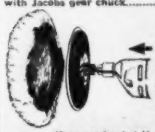

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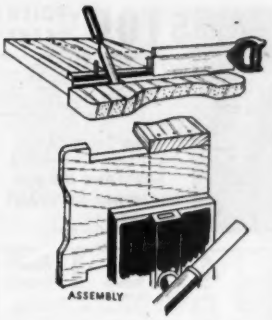
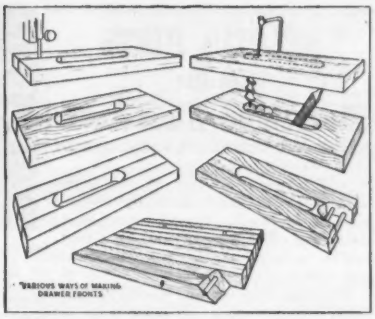




Tricky Cabinet Stool

(*Continued from page* 28)

up stock. This measurement will vary according to the thickness of your side pieces. In any case do not make it over 9", the width of leg material.

Two pieces of narrow stock or strips can be used, since there is to be a hinge joint over the saw cut which now shows on top of the unit assembly.

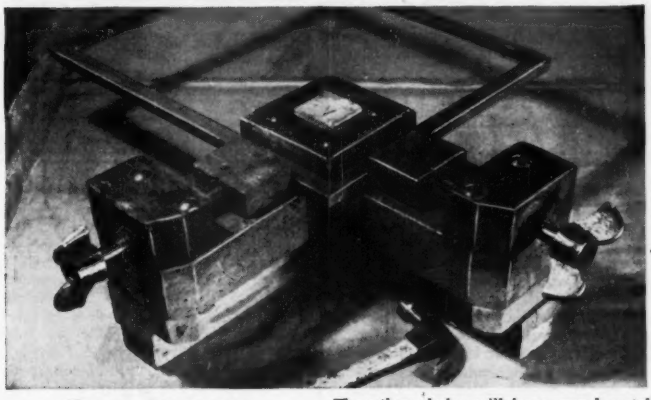
If you intend to incorporate a handle, lay it out and take care of it in one of several different ways. You no doubt already have selected your hinges, so mark out for them and do a substantial job. Place the completed hinged cover, nicely sanded, all corners rounded, on the box and note joint locations.

You again have a choice of methods for applying the top. Glue combined with concealed dowel sticks, or nails with heads removed, or the old reliable nails or screws thru the top will take care of this construction.

Finish saw cut so that top is free to open on hinges. A final sanding check ought to release you for finishing procedure. What will it be—stain, shellac, varnish, paint, lacquer?

A remnant of linoleum attached with casein glue will add to the appearance of the top for some developments, while a built-in pin cushion and spool holder will ring the bell on others.

Picture Framing Vise



By L. F. ADDINGTON

ANYONE interested in woodworking can make his own picture framing vise. To begin, make a base from 2 x 4" hardwood pieces. These should be perfectly square, the 4" sides facing up so that the other blocks may be fastened to them properly. These pieces should be 14" in length.

Now, with the square made, bolt to the joined ends a 2 x 4 x 4" block. At the ends of the base squares bolt other blocks, & thru these blocks bore holes into which hollow threaded pieces of metal may be inserted & secured. These metal pieces may vary from ¼" to ½", depending on the size & strength wanted. Thru these holes will be screwed metal bolts. The ends of the bolts are inserted in metal cups which fit into two more small wooden blocks.

The picture frame is inserted between the 4 x 4" blocks on the corners of the base square, & the movable blocks are pressed against the frame by turning the screws. In this manner the frame will be held securely in place so that corners may be nailed together.

The moving blocks on the ends of the screws can be adjusted by extending the screws into the deep metal cups, so that they will not fall off when in use.

This 2 x 4 x 4" base square may be built up by fastening other pieces to it, so that it will extend far enough above the work bench to clear the working pieces.

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HELPFUL HINTS for the Household Handyman

DUST the window cords in your house with a well-greased rag about twice a year, if you dislike the job of replacing them. The oil will keep them from fraying by reducing the friction. The sashes also will slide easier.

GREASE spots can be removed from floors with dry soda. Sprinkle it on the stains, then pour boiling water over them. After a few minutes, scrub with hot soap and water.

NIGHT-TIME door rattling can be prevented if you attach one end of your sock or tie to the outside door handle. Bring the rest of it around to fasten to the inside knob. Don't forget to fix the portal permanently in the morning.

YOU can remove a match scratch from white paint with the help of a half-cut lemon. Rub it over the damaged spot. Now wipe the place with a moist cloth that's been dipped in whiting powder.

WHEN the varnish you're preparing to use is thick and sticky, fix it up by setting the can in a pan of warm water. After a few moments it will be just right. Never put the can on the stove to heat. Some hobbyists thin the mixture with turpentine. This works well, but destroys the gloss.

INK spots can be removed from wood by rubbing a homemade mixture lightly into the spots. It consists of equal parts of linseed oil and vinegar.—Bess Ritter.

For Colored Brickwork

BRICKWORK can be colored cheaply and easily with a wash that, when dry, is insoluble in water and is quite lasting. To form the main base, dissolve one pound of powdered gum arabic and 2 lbs. of concentrated size in enough warm water to make a fairly thick solution. Add 8 ozs. of powdered borax and stir the mixture thoroly. Pour it into 2 gallons of hot water and add dry pigment of the color you want to paint.

Use lampblack for black; yellow ochre for a sandy yellow shade; venetian red for an earthy reddish color, etc. Attractive and unusual pastel shades will soften the contours of a building and make it more pleasing to the eye. They are obtained by mixing different pigments together in various proportions. Apply evenly with a large brush. Pick a nice day for the job, so that it will have time to dry, altho this does not normally take very long.—Eric Cameron

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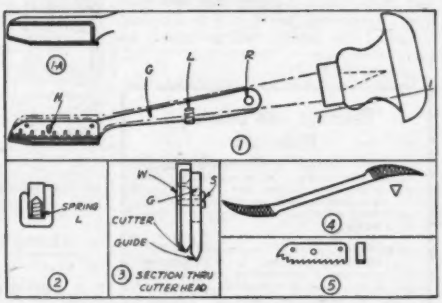
METAL WORK IN THE HOME WORKSHOP

By CLYDE BAKER

Checking and Scoring Tool Has Many Uses



THE drawing shows details of a tool originally designed by a gunsmith for injecting speed into the job of checking a gunstock . . . something not previously possible. The tool not only does this, but it also makes checking a simple & easy job, instead of a difficult one, as formerly.

Many of these have been made up for gunsmiths; but recently so many uses for checking, grooving & scoring have been found in various phases of woodwork, that this tool may now be found, in one form or another, on the benches of cabinetmakers, novelty workers, plastic fabricators, & many others. It is at its best on dense, close-grained hardwoods, such as walnut, maple, etc., as well as plastics; tho for simple straight line scoring & grooving it is equally useful on the more open grained woods like mahogany. Decorative panels of checking (sometimes incorrectly called "checkering") with straight or curved outlines, or in "point" effects, add to the attractiveness of many wood projects, & are easy of execution with this tool.

Blades are removable & interchangeable, & are made from printers' cutting rule"—strips of hardened & ground steel of very exact thickness. A printer's "point" being 1/72", it follows that 3-point & 4-point rule will give blade material 1/24 & 1/18" thick respectively, which are the most useful sizes. Cutting rule comes in 2-foot lengths at any printers' supply house, at about 30 cents per strip. Get it ground to "center bevel" & tempered to dark blue; then the teeth may be file cut, & the temper is just right for woodwork without further attention.

Make your blades about an inch long, by 5/16" wide, & use a piece from the bevel-ground side of the strip. Hold the part you want to have, & cut off the waste with a cold chisel held at an angle to give a shearing cut. Grind or file to shape, then file in the teeth, using a thin screw slotting file for the deep slots, & a 3-square needle file for the V points. Make all file cuts straight across—do not attempt to bevel or angle the teeth.

Cutter holder & shank is made of aluminum; or brass or steel if you feel ambitious. The cavity into which the blade fits may be milled in, or you can whittle up a pine pattern, & have a few cast in either aluminum or bronze, & finish the cavity with a square end rotary file or ¼" milling cutter in the drill press. Several of them were made in this way. Depth of this cavity should be the exact thickness of the blade, & the side wall about 1/32" thick. The total of blade thickness & side wall thickness gives the total thickness of the shank.

Fit blade in place with two No. 2 x 52 countersunk head machine screws. You will have to dress the heads down quite small in order to make them flush with the blade's surface. Harden them by heating to dull red, dip them ONCE into powdered pottassium cyannide, reheat to cherry red, & quench in water.

Near the center of the blade drill another hole thru blade & side wall of bladeholder. Tap hole in side wall for a 3 x 48 screw; but ream or drill the corresponding hole in blade to clear the screw.

The guide, "G," Fig. 1, is made of sheet iron or steel the same thickness as the blade being used. Its shape is indicated by the heavy outline in Fig. 1, while the light lines indicate blade & blade holder. A lip, "L," Fig. 1, is left on the bottom edge of guide near its rear end, & folded under & around the shank of blade holder, to form a housing for a small coil spring which is let into either a drilled hole or a notch filed into bottom edge of blade holder shank, Fig. 2. Pressure of this spring against the folded lip keeps the guide normally pushed down so that its edge is lower than edge of cutter blade, Fig. 3.

The 3 x 48 screw, "S," Fig. 3, goes

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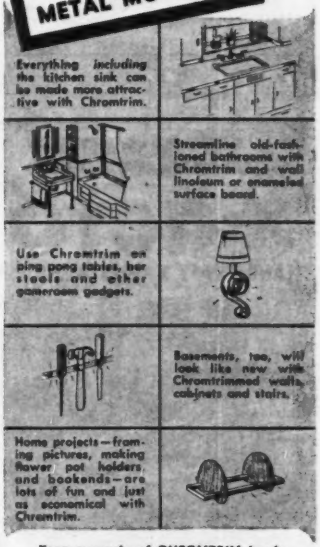

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thru an elongated hole in the guide, as shown in Fig. 1, "h." A "shoulder screw" is indicated here, if you are equipped to make one, as it can be tightened up against blade, while leaving the guide free to move up & down. A plain machine screw will do very well, however, if checked occasionally against excessive loosening. Rear end of guide is held in place on tool shank by either a pivot screw or a rivet, "R," Fig. 1, which should be just loose enough to permit the guide to move up & down freely. The V-edge of the guide, where it parallels the cutting blade, should be slightly rounded & smoothed, so that it will not scratch the work. The lower edge of side wall, "W," Fig. 3, serves as a depth stop when using the tool.

No dimensions have been given, for the reason that each mechanic will have his own ideas about the size that best suits him. An overall length of 5 to 6 inches, including the handle, will ordinarily be found desirable.

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—Morris A. Hall

Handle may be turned up from plastic or any close-grained hardwood, & should be shaped somewhat like a graver handle, as shown. Most workmen find it desirable to flatten the underside of handle along the line 1—1, Fig. 1, to enable them to get close to the work.

Note that the cutter blade is straight, not rocker-shaped, with slight upward relief at the point. It was found that this shape followed a straight line in making initial cuts, much better than a rocker shape.

TO USE: Hold handle of tool in palm, butt of handle firmly against heel of hand, forefinger extended along top of shank. Grasp tool easily, not tightly. Press down firmly on surface to be checked or scored, so as to cause guide to rise, as cutting edge cuts into wood. Work tool backward & forward with a free arm movement from the shoulder, advancing it slightly with each stroke.

At first you will want to score all lines lightly, going over them later for deepening; but as you gain confidence you will realize you can cut each line to full depth as you go. The fact is, it is better to do so, as the full depth line is better for the guide to follow.

Having cut one line, move the tool slightly to the right, allowing the guide to drop into the line just cut, & proceed to cut a second one—& so on, to completion. To finish ends of lines clean & sharp, raise handle slightly, so as to bring the square front end of blade into

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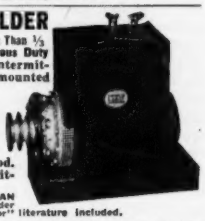

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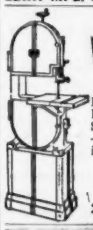

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play. It will stop cutting when lines reach full depth.

A series of parallel lines, cut with the grain, often forms an attractive decoration in itself. For checked designs, never cut either series of lines with the grain, but slightly across, so that the two series of parallel lines form an angle of about 60 degrees with each other. Never try to make square checking, as the squares will surely chip off in spots & look like sin. Diamonds, which are about 2¼ to 2½ times as long as their width, look best, either on gunstocks, or cabinet or other work. Perfect workmanship is evidenced when the rows of diamonds run in straight lines both laterally & longitudinally.

PREPARATION OF MATERIAL: On plastics, nothing is necessary—just start cutting. On wood, do all your varnishing, oiling, rubbing, or other finishing, before starting to check. Having laid out the outlines for pattern to be checked or scored, remove any varnish, shellac or lacquer from this area by scraping lightly, & coat the surface with raw linseed oil. Let stand an hour or so, then rub off with rag or waste, then proceed with the checking. When checking is complete, apply a little boiled linseed oil, into which a little alcanet root, or oil-soluble analine red has been dissolved; let stand ten minutes, remove excess oil with waste, & scour diamonds thoroly with a stiff bristle brush, such as an old toothbrush. The checked area will have a soft glow, & the grain of the wood will show right thru the checking or scoring. For the finest appearance, use a "silversmith's riffler,"* Fig. 4, to smooth up the checking after the final oiling. The diamonds should be worked up to very sharp points, then rubbed off very lightly with fine steel wool, then brushed briskly with stiff brush which may have a very little oil clinging to the bristles. Never, under any circumstances, apply any varnish, shellac, or lacquer to a checked or scored area . . . nothing but oil.

Flat-bottomed channels for string inlays, or "purfling" are easily made with this tool. First cut them with the V-cutter, then substitute for it one like that shown in Fig. 5, which works out the grooves to straight sides & flat bottom. A square-edged guide should be made to correspond. For this purpose it is essential that the lines run straight or nearly so; very short curves, such as are encountered on violin purfling, are not readily cut with this tool. Always remember—whatever the shape of cutter edge used, the edge of guide should correspond.

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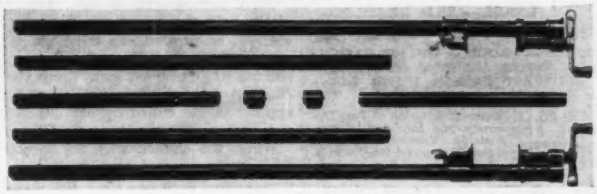

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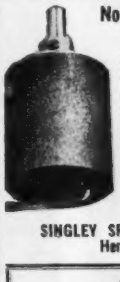

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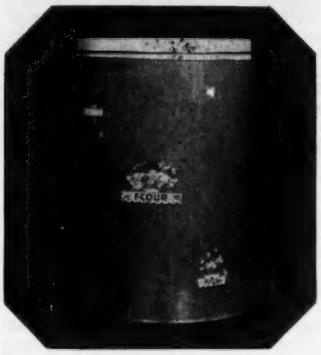

THE narrow strip of tape which originally held the lid of the can in place was pasted around the top edge of the can, as in Photo 1, in order to keep the enamel to be applied away from the top edge. A coat of white shellac was then applied to the entire tin and lid to provide a base for the enamel—(Photo 2).

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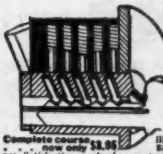
Photo 7 shows the completed canister and lid.



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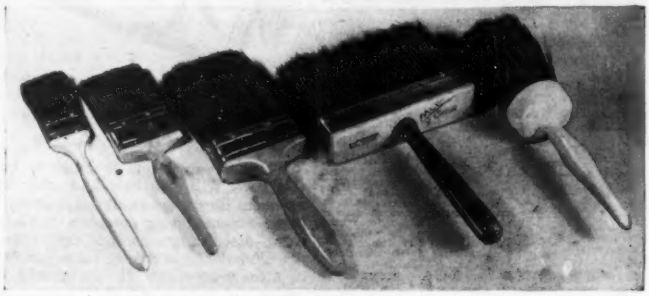
Your FINISHING PROBLEMS

By BENJ. NIELSEN



Brushes—left to right—sash, varnish, wall, calcimine, duster.

Selection, Use and Care of Brushes

A FINISH, whether house exterior or cabinet work, can be no better than the brush with which it is applied. Buying good brushes and keeping them in good condition pays dividends.

Ferrule and handle may be highly attractive, but it is the bristles that do the work. Quality paint brushes are made from Chinese-hog bristles which possess and retain a natural elasticity and springness found in no other type bristle. These bristles have flagellated, or branch-like ends which hold the paint and spread it evenly in a thin film. A small percentage of shorter bristles with these flag ends also will prevent paint leaking and running down the handle when working on overhead surfaces.

It is good economy to have several brushes, using separate ones for enameling, varnishing, painting and lacquering. A paint brush, no matter how carefully cleaned, is unsatisfactory for applying varnish—while a varnish brush used for painting is impossible to clean satisfactorily for use in varnish again.

The proper size and type of brush depends on the work to be done. A high quality tool should have a large percentage of full-length bristles. One hundred percent hog bristles is desirable, as some cheaper brushes contain horsehair, vegetable fiber and various substitutes which do not have the desirable flag ends. In many cheaper brushes the bristles have not been treated to permanently remove the curl, and a brush with bristles that curl is not a good tool. Quality in a new brush may be tested by bending the bristles over the back of one's hand. A good brush shows considerable spring and elasticity.

A flat wall brush is used for outside or inside painting. A long bristle brush holds more paint and requires fewer dips in the paint, enabling one to cover larger areas in less time.

For enameling, varnishing and lacquering, the flat varnish brush, measuring 1" to 3" is used. High grade varnish brushes usually have a chisel or tapered edge permitting easier flow of enamel, varnish, or lacquer. A sash brush is used for window sash, scroll work, and spindles. These vary in size—a small 1" to 2" width for use in close places, a wider type for larger trim. Sash and trim brushes are equipped with a long handle.

The dusting brush which all careful workmen use for removing soot, cobwebs and dust from surfaces before beginning to paint, has finer bristles than the ordinary paint brush and is available in round or flat types.

The calcimine brush is a large, flat brush measuring 7" or 8" in width. It never should be used in oil paint. It should be washed in clean water immedi-

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ately after use, the bristles carefully straightened out and the brush hung by the handle to dry.

When beginning work with a new brush, strike it several times against the edge of a board to throw out any dirt particles, work out any loose bristles with the fingers, then dip in turpentine and work it on a clean board. Brushes should never be jabbed or pressed hard into corners, for this will break off the flag ends of the bristles.

Immediately after use brushes should be thoroly cleaned in the proper solvent liquid. Gasoline, naphtha, benzine or turpentine, are used on brushes with which paint has been applied. Brushes used for shellacking should be cleaned in wood alcohol. Lacquer thinner is used for lacquer brushes. Benzine or turpentine is the proper solvent for cleaning brushes used with enamel or varnish. Using naphtha or gasoline causes varnish gums to form into small solid particles which work out on the next job.

Thoro cleaning is accomplished by submerging the brush in the proper solvent, working the liquid up into the bristles. Shaking the brush vigorously helps to throw out undissolved particles and dirty cleaning liquid. Wash again in clean solvent and straighten bristles, using a wire brush.

Brushes should not be stored on the bristles, as this causes them to curl, destroying the working shape. Brushes should be stored flat or suspended by their handles in a covered container with sufficient linseed oil and solvent to cover the bristles. Be sure to replace any liquid lost by evaporation if the brushes are unused for some time.

Coatings and Finishes

★ *To give silver a butler finish, anneal and let cool, boil in sulphuric acid and water pickling solution until it becomes pure white. Sometimes this takes 1 hour; if in a hurry, boil in this solution 1 minute. Lift out with wood or copper—never iron. Scratch-brush, using a fine wire brush and water, or a revolving brush at slow speed.*

★ *Aircraft paints include a bright aluminum for sunny days, one for hiding planes on dull days and a dull black hard for searchlights to find.*

★ *White lead is the oldest of white pigments for paints. The Dutch discovered 430 years ago that pig lead exposed to the action of carbonic acid from rotted tanbark and manure, in the presence of vinegar, produced hydrated carbonate of lead. Much of it still is made this crude way.*

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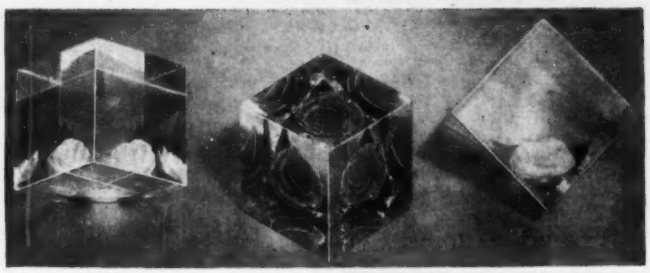

A 2½" cube paperweight. Center view looking into point opposite curved surface.

ACRYLIC plastics are more transparent than glass. By adding a simple design with internal carving it is possible to create an illusion of elaborate color and pattern. Placing the carving in a location where it will be reflected and seen several times, causes this illusion.

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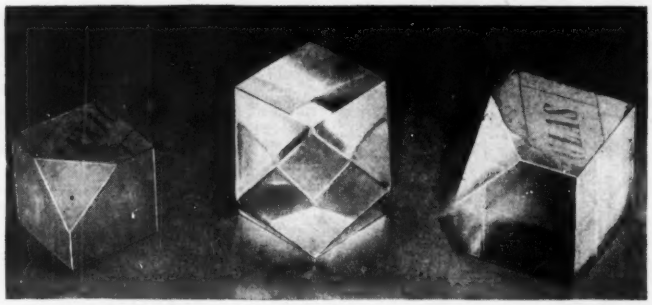
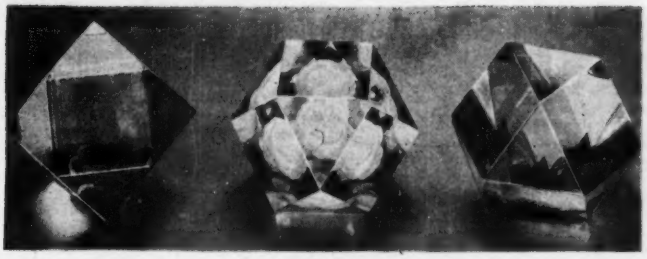
The effectiveness of the individual paperweights or blocks is dependent upon size. The larger the cube the larger the surface that is available for carving—which means the depth of the carving can be increased. 1½" cubes are about the smallest that will work satisfactorily for the cube weights, and 2" cubes, the smallest for making paragons. Blocks of plastic are obtainable from plastic supply houses or hobby shops. They can be obtained with the surfaces rought sawed, sanded, or completely polished. If sheet stock is purchased for cutting into cubes, remember to allow ⅛" for sawing, sanding and finishing. The thickness of the sheet material also must be checked to determine the exact thickness, since the manufacturers reserve a plus or minus 10% tolerance for sheet material that is over 1" in thickness.

Sawing sheet stock into cubes can be done on either a band saw or a table saw. When setting the guide on a table saw for cutting the cubes be sure to allow for the width of the saw cut, which will vary from 1/16" to ⅛", depending upon the blade being used. An allowance of at least 1/16" for each side must be made for the sanding and polishing processes. Each cut should be made slowly to prevent overheating the blade, which would cause the cut to be closed (or heat bonded) by the overheated particles which are being formed by the teeth of the saw. Overheating can be prevented



A 1½" cube, sanded only. A 2½" paragon ready for carving. A 2" cube showing removal of one corner.



Three views of 2½" paragon.

by lubricating the saw blade with paraffin and by feeding the plastic slowly into the saw. If it is necessary to reverse the larger piece of sheet material to complete the cut, a slightly larger allowance might be made for the irregularity caused by the double cutting.

After the cube has been formed the four sawed edges must be sanded. When using a belt sander, best results can be obtained by keeping the cube moving in a circular motion while holding a surface against the sanding belt. Do not use pressure against the sanding belt, and remove the excess material slowly. After the heavy sawmarks have been removed, it is advisable to use a fine belt of the wet-or-dry variety, so that the plastic can be sanded smooth on a wet surface.

After the cubes have been sanded, the surface will show pencil marks clearly. To insure accuracy in removing the one corner for making the cube paperweight, measure equal distances along two of the sanded edges away from one corner; connect the points. This will give you the line of the cut. The corner can be removed by setting a table saw at a 45° angle and holding the cube against a miter which has been set at 35°. The same set is used in setting a belt sander with an adjustable work table. It is not critical that the one corner for forming the cube weight be removed accurately to the marked line if only one corner is being removed. However, it is important that the eight corners be removed accurately to form a paragon. In marking the cut for removing the corners to form the paragon, allow ⅛" in the center of each side for sanding and polishing. This will make four surfaces joined in a definite point after the corners have been removed. After the corners have been removed, sand the surfaces in the same manner as the other surfaces have been sanded to prepare them for buffing and polishing.

Buffing and polishing of the paragons and cubes is no different than the finishing of any other piece of plastic. Care should be taken to retain a definite point of union for the various corners of the finished pieces. When polishing the cubes start in the center of the revolving buffing wheel and move the piece upward, while keeping a corner of the surface being polished pointing downward. A better polish thus can be obtained; and the danger of the buffing wheel forcing the piece from your hands is reduced to a minimum. Putting a slight even pressure on the plastic against the buffing wheel will give a more satisfactory finish than greater pressure.

When the initial point of entrance is made for the carving of the flower, the depth should equal the distance from the center of the triangular surface to the outside angle. The center is formed and the petals are carved in layers revolving around the center. The last row of petals should come as close as possible to the outside surface, but care must be taken to prevent the drill coming thru the surface. The three leaves are formed by making the initial point of entrance about ¼" away from the cavity formed by the flower. Here again, care must be taken to make the leaf as deep as possible without having the drill come thru the outer surface and also without joining the carving of the flower, since the green dye used for the leaves must not penetrate into the flower.

The dyeing process will provide a great deal of leeway, and the final effect is dependent upon the quantity and color of the dye. Pure, full strength dyes can be added if a solid colored flower is desired. Most analine dyes can be diluted with either a special diluent or ethyl alcohol to give a lighter shade, and colors can be blended to give unusual effects. If a combination of dyes is to be used, always use the lighter color first and add the darker dye very slowly until a desired blending has produced the desired color. A varigated effect can be achieved by using a darker shade of dye and permitting it to dry. Then tracing out each petal with the tapered drill to remove a small portion at the tip of each petal which will be white; or pressure can be put against the drill to give the same effect in the center of the petals.

The finished article can be used as a paperweight or as an ornament—frequently termed conversation pieces. They also can be used as the decorative portion of book ends by bonding them onto a base or can be formed into candle holders by drilling a hole for the candle into the top surface of the paragon.

Plastics and Plastic Working

★ *Circular saws for Lucite should be equipped with stiffener washers at the shaft to minimize blade vibration. They should be hollow ground to prevent binding. Pull saws can be used on large sheets if plastic is held at the table.*

★ *Since surface hardness of Lucite is comparable to that of aluminum anything that will scratch that metal will also scratch the plastic. Marring the finely finished surface reduces its transparency so it should be handled with great precautions. During inspection, sheets are stood on edge on a soft fabric, the inspectors handling them individually with clean, soft cotton gloves. The amateur using it should handle it somewhat similarly.—Morris A. Hall*

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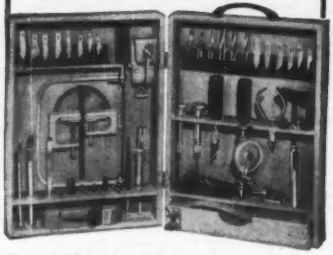

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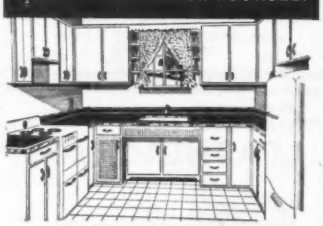

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Desk for a Corner

(*Continued from page 23*)

these edges may act as runners (A, Fig. 3). A couple of nails are toenailed thru the bottom and into the front to complete the drawer.

The cabinet carcass is constructed as shown in Fig. 4. The frames between the drawers (B, Fig. 3 and 4) are made of 1" x 2" and 1" x 4" stock joined with fasteners (C, Fig. 3). Notches (D, Fig. 3) that allow for the vertical corner pieces are eliminated on the bottom frame. Instead, the frame measures 11¾" in depth and abuts a 1 x 4" piece (A, Fig. 4) that runs parallel across the bottom front. A 1" x 2" strip ripped in half forms excellent drawer guides (E, Fig. 3). These guides should be nailed down so that at least 1/16" is left on each side for easy sliding.

Panels (C and D, Fig. 4) are made from ⅜" plywood and are nailed to the frames with 1½" finishing nails. The frames are spaced 3¾" apart. A plywood back of ¼" stock is cut (E, Fig. 4). Three triangular braces (P, Fig. 4) are spaced from top to bottom and fastened to panel (E) to give support to panel (D).

Boards (F, A, G, H and I, Fig. 4) are all made of ¾" x 1¾" stock, with the exception of (I) which is 2½" wide x ¾" thick. They are fastened with finishing nails and sunk. Board (H) is secured at the top and bottom with 4" corner braces. These braces are attached to the top and bottom pieces (J), which is nailed to panel (C) and board (A). A 3¼" wide board (K) finishes off the butt end and a ⅜" plywood door, hung on 1½" recessed hinges, uses a ⅜" strip as a stop. A panel is cut from ¼" plywood and fitted to form a back for the door cabinet.

Two triangular shaped frames made from 1" x 4" stock (M, Fig. 4) form kick boards and are fastened with 1½" corner brackets to the bottoms of the rolltop and the drawer sections. They should be so placed that they are recessed at least 2" at all points.

Corner brackets fastened at vital points secure the drawer and door cabinet to the top with ¾" screws. This arrangement permits the desk to be disassembled.

The curved section (N, Fig. 4), is constructed of ¾" thick pieces cut with a compass saw to follow the same 5" radius curve as the top. The pieces are glued together in laminated fashion, planed down and sanded. A notch, ½" deep, is made to accommodate board (I) which is 33½" long.

The length of piece (O, Fig. 4) will vary, depending upon the width of the particular rolltop section. It is made from ¾" stock and curved on the underside to give knee room. It is screwed to the laminated section. Both are fitted into place and secured to the top with small corner brackets. The laminated section is glued and nailed to board (I) and panel (D).

A back board between the rolltop and drawer section is optional. A satisfactory one can be fashioned from ¼" plywood and should reach to the bottom of the cabinets.

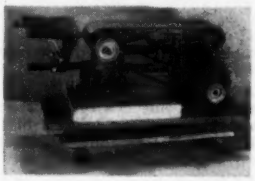
The desk is ready for finishing after it has been thoroly sanded and the holes and cracks filled with wood filler. The actual finish decided on will depend upon the general color scheme of the room. It is suggested that a deep flat tone paint be used which carries out the modern effect of the design. The desk shown was finished in deep burgundy with black kick boards. The use of paint is best for this project because it covers well the many nail holes. A natural finish may be used, tho, if the wood matches that of the rolltop and is hard and of good quality.

The top may be finished natural or painted and then either varnished or waterwaxed. A very impressive effect (see photo) may be achieved by covering the top with cloth-backed leatherette fastened with wallpaper paste. The edge of a smooth board, drawn tightly over the surface, squeezes out excess paste and leaves a very satisfactory top. The leatherette should be cut long enough so that it will overlap the edges.

The edge of the leatherette should be folded under so that it covers the desk edge with a finished effect. Pasted down and fastened with leather like upholstery nails every inch or so, it makes a beautiful job. An aluminum strip, as used on display signs, finishes the edge of the desk shown here instead of the upholstery nails. This strip matches the small aluminum pulls.

Modern drawer pulls, a cabinet catch, a lamp and an inkwell provide finishing touches.

LET'S SWAP IDEAS:

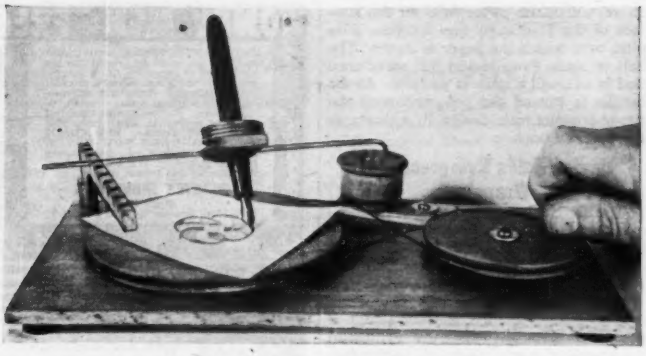


CLOSE COUPLED HOOK-UP FOR BELT AND DISC SANDER

We owe a vote of thanks to Francis Munson, 528 N. Heliotrope Drive, Los Angeles, for another solid shop idea. This set up requires lifting either from the floor to a bench or from a shelf to a bench. Therefore, it is advised only for small sanders.

The picture tells the story. The base in this case is a board ¾" x 8" x 24". Put a narrow cleat across each end to prevent splitting and to provide a finger hold. A thin strip of rubber nailed or glued under each cleat will absorb vibration and give non-skid operation. Block the sander high enough to clear the motor.

For additional convenience, the unit can be rolled in and out on a small dolly if it is kept under the bench.



A Fascinating Wooden Toy

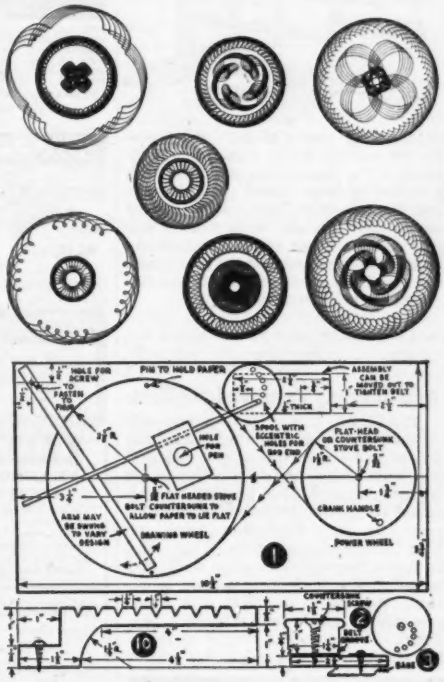
By
C. B. KING

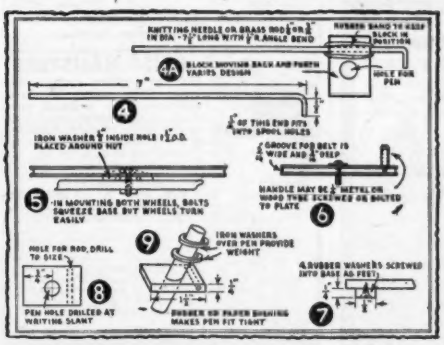
A TOY to delight youngsters & to afford many an hour of instructive entertainment for all ages can be constructed easily by the woodworker with a minimum of tools & material. All of the wood used has a thickness of ¼".

As the diagram & photograph show, this designograph is built on a base of ¼" thick wood, to which are fastened two wooden discs grooved with a round file. These take a cord pulley-belt which should be threaded exactly as shown in the diagram. The 3" disc is mounted in just the same manner as the larger one, has a handle which allows the operator to turn all three wheels connected with the belt.

The small wheel, made from a wooden spool, has four or five holes drilled into its top to a depth of about ¼". A metal rod made from a straight piece of coat hanger wire, or from a steel knitting needle, & bent to a right angle at one end, is used to carry a square piece of wood thru which a fountain pen, ball point pen, or an inkograph pen, is thrust.

The angled end of this metal rod rests on one of the eccentric holes in the spool top, while the straight end glides in one of the grooves filed into the top edge of the holder. The pen point writes





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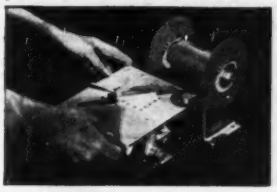

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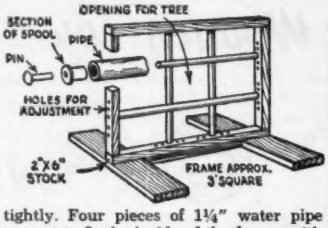
on smooth white paper held on the surface of the 5" disc by two headless wire pins, over which the paper is thrust. The belt is made from a thin but stout cord tied in as small a knot as possible. As the handle is turned the pen writes on the paper completing a design in a dozen or more revolutions.

Device Holds Evergreens for Wrapping

WHEN wrapping evergreens for shipment it is difficult to hold down the branches while applying the burlap. To facilitate wrapping build this simple device:

A frame about 3' square is made from 2 x 6" stock mounted on two pieces of the same material. Holes are drilled in the frame of a size that will hold a pin



tightly. Four pieces of 1¼" water pipe are cut to fit the inside of the frame, with about ¼" to spare. They are fitted with a section of large thread spool on each end. The hole in the spool may be reamed out to allow the pin to fit loosely. The pipe sections (used as rollers) then are installed in the frame and the pins placed thru the holes corresponding to the size evergreen being wrapped.

When in operation, a tree is pulled thru the square made by the rollers and wrapped as it emerges.—By Victor H. Lamoy

Anti-Dimming Compound for Glass

THERE are various preparations sold for the purpose of preventing the formation of sweat and frost on the inside of car windshields and the windows of houses. A simple, inexpensive, and effective compound is made by mixing together 1½ oz. of Diethylene Glycol with 1 oz. of precipitated chalk. They must be mixed thoroly, altho more chalk may be added if a thicker consistency is desired. Applied to the glass with a rag, it is rubbed briskly until a polish is produced. The compound should be stored in a tightly capped jar.—J. R. E. Cameron

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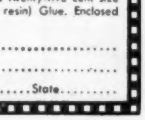

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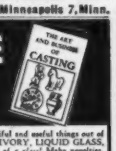

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For the Workshop

(*Continued from page* 16)

Plexiglas Saw Guard

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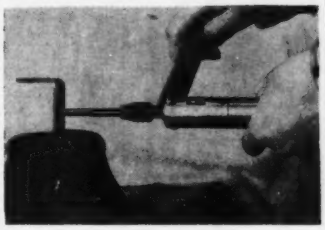
more than 3" thickness, and the double-pivoted type B for thicker stock. A pin arrangement holds the guard in a vertical position for adjusting or changing blades. It can be lowered instantly. Thus there is no possibility of the guard's being removed and not replaced.

"Tooldriver"

(No. 660) Consists of three sections: handle, lever-ratchet and chuck. The ratchet mechanism provides an action similar to a brace and bit, when the lever



is folded out. When the lever is folded against the tool it becomes an ordinary screwdriver with a ratchet action. Grinding the ends of Phillips, Clutch Head, Allen and other special screwdriver bits modifies them to fit. Two screwdriver bits and one square drive shank for wrench sockets are furnished. The chuck takes all taps up to ¼". Price $3.75; Wesport Tool Co., 9834 S.W. 35th Drive, Portland 19, Ore.

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50 accessories, and Power Tool in serviceable, burgundy plastic chest.

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CASCO CASCO Products Corp. Bridgeport 3, Conn.

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NO RECEIVER BUTTON IN THE EAR!

• The Phantomold combined with the Beltone Hearing Aid assures you of unsurpassed hearing quality for both tone and volume. But best of all, even your friends won't notice that you are wearing a hearing aid. You owe it to yourself to see this newest hearing improvement and convince yourself that now for the first time you really can conceal your deafness.

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KEEP YOUR MOST-USED TOOLS AT YOUR FINGER TIPS!

This ingenious new MAGNETIC TOOL HOLDER solves the problem of holding various shaped tools on ONE rack. Designed to hold securely—tools, knives, scissors, utensils, instruments—in fact any implement made of Steel! Genuine ALNICO magnet cannot weaken or get out of order; will last a lifetime. *No electricity needed.*

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A picture cannot possibly convey the many advantages of the MAGNETIC TOOL HOLDER, so we want to place one in YOUR home or shop at OUR RISK! Order yours today and try it for one week. *If you don't agree that it is worth every penny you paid, send it back to us for full refund.* You couldn't ask for a more liberal offer. (The tools shown above are for illustration, and not included with holder.) Dealers wanted.

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for WOOD and PLASTICS
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IMPORTANT—When ordering advise MAKE OF SAW, whether MOTOR OR MAGNETIC DRIVEN, length of blade 5" or 6", PLAIN END or PIN END.

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Electrically welded, teeth accurately filed and set, properly tempered, endless.
3/32" to 1", also Metal cutting ¼" to ½".

$1.00 and up, Postpaid
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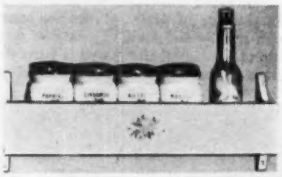
Prompt Shipment. Satisfaction Guaranteed.

HAR-WIL PRODUCTS CO., 6525 N. WASHTENAW AVE. DEPT. H-20, CHICAGO 45, ILL.

New Wood Products

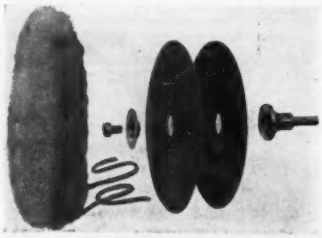
(No. 662) A new line of low-priced household items has been introduced by Oshkosh Wood Products Corp., Oshkosh, Wis. Consists of racks for kitchen and bathroom use, which are shipped either



knocked down, assembled, or pre-finished and assembled. The unassembled units, offering recreation to home workshop craftsman, are cut to exact measurements and have instructions for assembling.

Plastic Pad for Sanding, Polishing, Buffing

(No. 663) The Bo-Mer Mfg. Co., 8 Columbus St., Auburn, N.Y., announces a new type semi-rigid, reinforced plastic pad. Bo-Flex pads of different sizes use the same detachable center. The standard kit includes 1 Bo-Flex pad, 1 flexible leather pad for buffing, 6 assorted sandpaper discs, 1 chrome tanned lambskin buffing bonnet, 1 detachable steel center assembly, and instructions. The standard kit is made in 5" and 6" diameters.



Gun Tacker

(No. 664) The Arrow T-32 gun tacker made by Arrow Fastener Co., Inc., 30-38 Maujer St., Brooklyn 6, N.Y., is recommended for the home workshop in per-

forming carpentry tasks, making cabinets, tacking screens, repairing pictures and window shades, and similar purposes. It tacks at trigger rate speed, will shoot a staple wherever a tack can be driven.

Multi-Purpose Cam Press

(No. 665) This new tool by Marshalltown Mfg. Co., Marshalltown, Iowa, is for punching, riveting, forming, sizing, upsetting, bending, drawing, staking, nibbling, assembling and other small press operations that require accuracy and precision.

A sturdy press with a rated capacity of 1½ tons pressure near the bottom of the stroke, it provides accurate operation for small parts production runs which are limited in quantity. Priced at $42.00 f.o.b. Marshalltown, Iowa.

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BUY Thousands of Nationally advertised products direct from manufacturers and distributors. Write for "Buy Direct and Save." Service Publishing, 218-L Investment Bldg., Pittsburgh 22, Pa.

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BOAT blueprints and full size cut-to-shape paper patterns, $3.75 up. Latest designs, all type pleasure boats, 8-28 ft. Illustrated "Build A Boat" catalog, 25c. Book "How to Build Boats," $1.00. Poly-Wog Houseboat Plans, $10. Marine Catalog $1.00. Cleveland Boat Blueprint Co., Dept. A-18, Cleveland 13, Ohio.

BOAT Builders' Book—New Revised 96 page edition just out! Complete plans for building 20 boats with step-by-step photos, detailed diagrams, bills of materials, pictures of completed boats, short cuts, kinks in boat building, etc. Send for yours today, only $1.50. Homecraft Book Shop, 814 N. Michigan Ave., Chicago 11, Ill.

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MAGAZINES (back dated)—foreign domestic, new. Books, booklets, subscriptions, pin-ups, etc. Catalog 10c (refunded). Cicerone's, 863 First Ave., New York 17, New York.

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$46 FROM Square Foot Plywood; Jigsaw necessary. Excellent Home Business. Write, Woodarts, X-66, Bridgewater, Mass.

EARTHWORM Breeding. Valuable bulletins on successful methods mailed free. Earthmaster Publications, Dept. 18, Sun Valley, Calif.

WOULD you pay 3% first $350 made? Illustrated book "505 Odd, Successful Enterprises" free. Work home. Expect something odd. Pacific, Oceanside, Calif.

BE independent, be secure, have your own profitable business—earn $10,00 and more a day, making beautiful, fast-selling lamps at home. No equipment needed. Illustrated course teaches you quickly. Course, parts catalog, wholesale price list—only $2.00. Gearon Company, Dept. 200-P9, 27 South Desplaines, Chicago 6, Ill.

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GET into the Paint Business! Help fill increasing demand for top quality guaranteed house paints, roof coatings, interior finishes, specialties. Sell direct from long-established manufacturer, full or part time, permanent; advance commissions, no investment. Particulars free, or send 50c for Sales Kit and start next week. Standard Industrial Products Inc. Dept. PH-9, Evansville 4, Ind.

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ELECTRIC PENCIL. Engraves all Metals, $1.25. Beyer Mfg., 16511-P, Springfield, Chicago 43.

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BAMBOO! Giant Florida Bamboo. To make furniture, lamps, wall vases, hanging flower pots, ideal for home, profit. Butt ends approximately 8 inches long, 2½ inches in diameter 25c each. Center 12 to 15 inches long, 2 to 2½ inches in diameter 50c, tip ends approximately 12 inches long, 2 inches in diameter 35c each. Minimum order 3 joints, shipped 2 joints long unless otherwise specified. Instructions, suggestions furnished. Roy Willingham, Box 188, Palmetto, Fla.

WHOLESALE plastics supply catalog, 10c. Lucite, clear, colored. Metallic acetate, mirror-like colors. Complete Castolite line, glow-at-night powders, dyes. Metal findings. Tools, ideas and bargains galore. Fast delivery from stock. Gem-O'-Lite, Box 686-10J, No. Hollywood, Calif.

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LAWN chairs, garden figures, furniture, novelties, toys, etc. 68 popular plans with full size patterns, $1.00. Mastercraft 10H1, 7041 Olcott, Chicago 31, Ill.

WHEELS for toys, in rubber, plastic wood and metal. Sample assortment available for $1.—and price list. Walters Hobby Shop, Dept. PH-9, 207 French Road, Utica 4, N.Y.

SHELLCRAFT! Income or Hobby. Largest catalog ever published! Illustrating supplies, designs for Shellcraft, novelties, scalecraft, sequincraft, etc., including brooch or novelty Kit (state choice) $1.00 postpaid. Satisfaction or refund. Pace's, Cortez 5, Fla.

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SHEBEL Universal Saw Filer files all saws. Circular. A. P. Shebel, 730 S. 2nd St., Milwaukee 4, Wis.

PRECISION woodworking drill press shaper kit. Five different cutters, guard, shaft. $3.95. Lloyd Walner, 921E Cedar, Burbank, Calif.

PLASTICS

WHOLESALE plastics supply catalog, 10c. Lucite, clear, colored. Metallic acetate, mirror-like colors. Complete Castolite line, glow-at-night powders, dyes. Metal findings. Tools, ideas and bargains galore. Fast delivery from stock. Gem-O'-Lite, Box 686-10F, No. Hollywood, Calif.

SOMETHING new in Figurines and Ash trays. Write for free list. Magic Valley Novelties, Box 771, Shoshone, Idaho.

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WALNUT, cherry, maple, birch and other hardwoods, kiln dried. Worked to your specifications. Send stamp for price list. Corbett Cabinet Co., St. Mary's, Pa.

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HUNTING Knife Special: High quality steel blade, 4" long. Attractive, folding, all-metal handle. Knife 8½" long when open; only 5" folded. Retail price $2.95; closeout price only $1.50, for limited time. Send money order or check to BJL, 814 N. Michigan Ave., Chicago.

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RACING And Sports Equipment For All Cars! Hollywood "Deeptone" mufflers $4.85, V-8 Duals $15.90, Hot Rod instructions and catalog 25c (Agents wanted). Almquist Engineering, Milford 71, Pennsylvania.

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2½ x 3" DRUM SANDER A "must" for sanding contours and straight edges $3.95 With 5 Sleeves. Also in 1" diameter $2.10

ROTARY SURFACE SANDER 4" dia. aluminum housing and heavy rubber pad. A perfect finishing sander. $5.95 With 20 Discs.

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Mail Audels Carpenters and Builders Guides, 4 vols., on 7 days free trial. If O.K., I will remit $1 in 7 days and $1 monthly until the price is paid. Otherwise I will return them. No obligation unless I am satisfied.

Name_____

Address_____

Occupation_____

Employed by_____ CPT

Q. Where can I get noodle glue? This glue is used to make designs on glass.

A. Noodle glue or Selectus Technical Gelatin can be purchased from Swift & Co., Adhesive Div., 4115 S. Parkers, Chicago, Ill.

Q. Where can I buy veneer in Massachusetts?

A. Parmer & Parker Co., 103 Medford, Boston, can supply you with veneer.

Q. Please advise if there is a tool for sharpening planer knives?

A. Warner Electric Co., Inc., 1512 Jarvis Ave., Chicago 26, Ill., can supply you with such a tool.

Q. Will you please tell me what companies manufacture Formica, Micarta and Textolite sheeting?

A. Formica is made by Formica Insulation Co., 4615 Spring Grove Ave., Cincinnati, Ohio. Micarta is made by Westinghouse Electric & Mfg. Co., Hill St., E. Pittsburgh, Pa. Textolite is made by General Electric Co., Chemical Div., 111 Plastic Ave., Pittsfield, Mass.

Q. Where can I get books on Rustic Construction and Creative Crate Craft?

A. Write Hobby Books, 814 N. Michigan Ave., Chicago 11, Ill. for Rustic Construction by W. Ben Hunt priced at $1.25 and Creative Crate Craft by Paul V. Champion is priced at $1.50.

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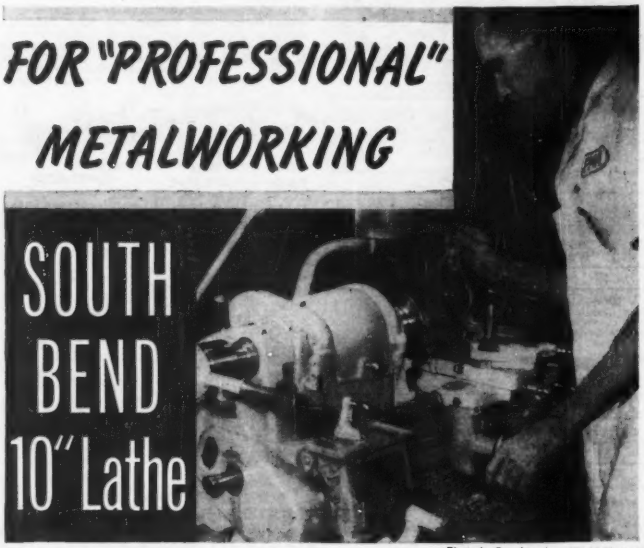

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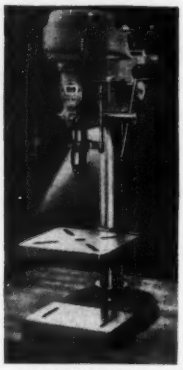
Time Payments: $234.35 down, twelve monthly payments of $61.92 each

Here is the lathe for shop owners who are satisfied with nothing less than the best — men who work to professional standards. It is built for the finest industrial precision work — exceedingly accurate, ruggedly designed and easy to operate. You need it to do work of toolroom caliber.

PRICES OF SOUTH BEND LATHES

SIZE	QUICK CHANGE GEAR MODEL	TOOLROOM MODEL
9" x 3' Model A	$303.45	$516.45
*10" x 3'	924.35	1231.35
*13" x 5'	1332.25	1694.25
*14-1/2" x 5'	1581.25	1963.25
*16" x 6'	1729.25	2145.25

***These lathes have 1" maximum collet capacity.**
Prices, f.o.b. factory, include 3 ph., 60 cycle motor and drum switch.



14" BENCH MODEL DRILL PRESS
Price, f.o.b. factory, with 1/3 h.p., 1 ph., 60 cy. motor, chuck, switch. **$129.30**
Time Payments: $33.30 down, 12 monthly payments of $8.48.

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SOUTH BEND LATHE WORKS
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What's your home workshop problem? Ask us your questions—and if we don't know the answers we'll do our best to find them for you without delay.
By Perry B. Graham, Associate Ed.

Q. I have just acquired a large black walnut tree trunk and would like some information on an inexpensive method of curing it at home?

A. If you will write to Forest Products Laboratory, Madison, Wis., they will give you the information on curing black walnut.

Q. Where can I buy paint, enamel and lacquer for using the silk screen process on wood and glassware?

A. Naz-Dar Co., 469-483 Milwaukee Ave., Chicago 10, Ill., have a complete line of silk screen process equipment for working on wood. For working on glass, Maurer Co., 316 Grand Ave., Chicago, Ill., carries the powder and special mixing medium that is used.

Q. Could you advise me where I might buy a screw box for cutting threads in wood?

A. Write to Bignell Machine Co., 516 Seventh St., N.W., Grand Rapids, Mich.

Q. I am interested in getting a Taylor Hobbycraft Jointer Planer to use at Cub Scout meetings. Would you send me the name and address of the company that makes Taylor Hobbycraft tools?

A. Taylor Shantz, Inc., Hodge & Commercial Sts., Rochester, N.Y., manufacture Taylor Hobbycraft tools.

Q. Will you please tell me where I can buy sockets to use with sewing machine light bulbs or night bulbs in making novelties?

A. Bardon Mfg. Co., Inc., 724 Atlantic Ave., Brooklyn, N.Y., sells sockets for lights that are used in sewing machines. Arrow Hart-Hegeman Electric Co., 100 Hawthorn St., Hartford, Conn., and Frank W. Morse Co., 1300 Soldier's Field Rd., Boston, Mass., also make small light sockets.

Q. Where can I get coverings for suitcases made of plywood?

A. You can get plastic material and coated fabrics for covering suitcases from Masland Duraleather Co., Amber & Allegheny Ave., Philadelphia, Pa., and velour, wool and rayon finishes from G. A. Stahl Co., 1406 Frankford Avenue, Philadelphia, Pa.

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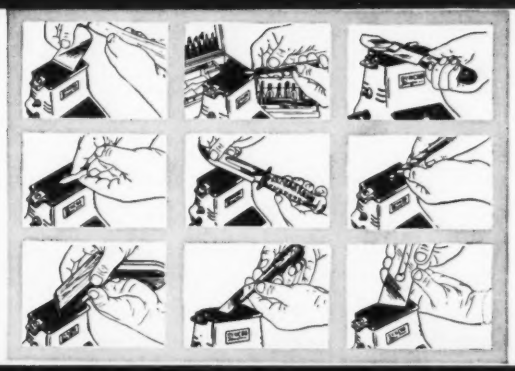

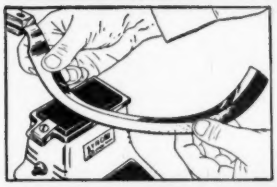

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